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Education Department Bulletin

Published fortnightly by the University of the State of New York

Entered as second-class matter June 24, 1908, at the Post Office at Albany, N. Y., under the act of July 16, 1894

No. 470 ALBANY, N. Y. May 1, 1910

New York State Museum

John M. Clarke, Director

Charles H. Peck, State Botanist

Museum Bulletin 139

REPORT OF THE STATE BOTANIST 1909

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UNIVERSITY OF THE STATE OF NEW YORK

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New York State Education Department

Science Division, February 23, 1910

Hon. Andrew S. Draper LL.D.
Commissioner of Education

SIR: I have the honor to communicate herewith for publication as a bulletin of the State Museum, the report of the State Botanist for the fiscal year ending September 30, 1909.

Very respectfully
JOHN M. CLARKE
Director

State of New York
Education Department
COMMISSIONER'S ROOM

Approved for publication this 24th day of February 1910

A. S. Draper

Commissioner of Education

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New York State Museum

JOHN M. CLARKE, Director
CHARLES H. PECK, State Botanist

Museum Bulletin 139

REPORT OF THE STATE BOTANIST 1909

Dr John M. Clarke, Director of State Museum:

The following report of work done in the botanical department of the State Museum for the year 1909 is respectfully submitted.

Since the date of my last report specimens of plants for the State herbarium have been collected in the counties of Albany, Columbia, Jefferson, Lewis, Livingston, Rensselaer, Steuben, St Lawrence, Warren and Wyoming. Specimens have also been added to the herbarium that were received from correspondents and others. These were collected in the counties of Albany, Cayuga, Dutchess, Essex, Franklin, Herkimer, Monroe, New York, Oneida, Onondaga, Ontario, Orleans, Oswego, Queens, Rensselaer, Schoharie, Suffolk, Tompkins, Ulster, Warren and Washington.

The number of species of which specimens have been added to the herbarium is 255 of which 56 species were not before represented in it. Of these, 11 are considered new or hitherto undescribed species. All except one are fungi. The specimens of the 199 species not new to the herbarium serve to give a better or more complete representation of their respective species than was given before. A list of the names of all the added species is given under the title "Plants added to the herbarium."

The number of those reported as contributors to the herbarium is 66. Some of these have sent specimens for identification merely, but when the specimens were collected in this State and were received in good condition, if the species was previously unrepresented in the herbarium or if for any other reason they were deemed worthy of preservation, they have been preserved and credited to the sender as a contribution to the herbarium

Some of our best and most interesting additions to the herbarium have been made in this way. The names of contributors of such specimens and of extralimital specimens with their respective contributions are given under the title "Contributors and their contributions."

The number of species added to our New York flora is 77. Several of these have been reported before as varieties of other species or confused with other species, but having been recently admitted in Gray's New Manual as distinct species it has been thought best to record them as such with their known New York localities. The names of these and other added species together with their localities, descriptions of new species, and other matters of interest will be found under the title "Species not before reported." Under the heading "Remarks and observations" any facts of interest concerning the species mentioned are recorded. This record may include new varieties of plants or notable variations, new localities for rare plants, and remarks concerning the diseases of plants or their economic properties.

The work of testing our wild mushrooms for their edible qualities as opportunity was given has been continued. Five species have been personally tested and approved as edible. These, added to the species and varieties previously known, make the number of New York species and varieties now known to be edible 200. Plain and simple descriptions of the newly added species are given under the title "Edible fungi." Colored figures of these species may be found on plates 117–20. Among the extralimital contributed specimens 10 apparently new species are represented. Descriptions of these species are given in a part of the report marked "New species of extralimital fungi." Colored figures of six of these species may be found on plates W, X, Y and Z.

Revised descriptions of our New York species of the genera Inocybe and Hebeloma have been prepared, with keys to the sections or subgenera and to the species. It is believed that these simple localized monographs will be helpful to those studying or desiring to study these interesting subjects of the vegetable kingdom. These chapters are respectively entitled "New York species of Inocybe" and "New York species of Hebeloma."

The climatic character of the season has been to a large extent a repetition of that of 1908. A cold late spring, an unusually dry summer and prevailing cool weather were its characteristic

features. These conditions were decidedly unfavorable to wild mushroom growth. Scarcely any could be found except the few that naturally inhabit swamps and low wet ground in woods. In the latter part of the season gentle rains moistened the surface of the ground sufficiently to insure the development of good agricultural crops and a fair seasonable crop of some mushrooms. But the effect upon the common mushroom, Agaricus campester and its variety, the garden mushroom, Agaricus campester hortensis, is worthy of special notice. In the vicinity of Albany a gentle and prolonged rain, the latter part of August, moistened the surface of the ground quite effectually. In a few days the common mushroom appeared in unusual abundance, though it was a little earlier in the season than it usually appears. The mushrooms were so plentiful that at least one fruit dealer offered them for sale in quart baskets at his fruit stand. A few weeks later light showers were followed by a copious crop of the "garden mushroom," a form differing from the common mushroom in having its cap adorned with brownish fibrils which form small spotlike scales on it and give it a darker color than that of the white form of the common mushroom. This crop continued to develop freely for several days and grew in some instances in pastures of light sandy soil where mushrooms are not usually expected to grow. The same abundant appearance of the edible mushroom was reported to have followed the light autumnal showers in other localities in the State. The lesson it teaches is that for mushroom production gentle showers are better than torrents of rain.

The number of those who have sent or brought specimens of plants to the office of the botanist for identification is 152. The number of identifications made is 1717.

Mr S. H. Burnham, my assistant, in addition to his other duties, has prepared a list of the names of the edible, poisonous and unwholesome species of mushrooms hitherto figured and described in the publications of the museum, together with the citations of the time and place of publication of each. He has also prepared a list of the genera of fungi of which the New York species (chiefly) have been described as far as known in previous reports. The time and place of these limited monographic publications are cited. Both these lists may be found at the end of this report.

CHARLES H. PECK
State Botanist

Albany, December 24, 1909

PLANTS ADDED TO THE HERBARIUM

New to the herbarium

Ascochyta solani-nigri *Diedicke*
Belonidium glyceriae *Pk.*
Biatora cupreo-rosella (*Nyl.*) *Tuckm.*
Bidens tenuisecta *Gray*
Boletus viridarius *Frost*
Carduus crispus *L.*
Chaenactis stevioides *H. & A.*
Ciboria luteo-virescens *R. & D.*
Clitocybe candida *Bres.*
Cortinarius subsalmoneus *Kauf. Ms.*
Crataegus brevipes *Pk.*
C. efferata *S.*
C. letchworthiana *S.*
Diplocladium penicilloides *Sacc.*
Diplodia cercidis *E. & E.*
D. hamamelidis *Fairm.*
D. tamariscina *Sacc.*
Dothiorella divergens *Pk.*
Epipactis tesselata (*Lodd.*) *Eaton*
Fenestella amorpha *E. & E.*
Hypholoma boughtoni *Pk.*
H. rigidipes *Pk.*
Leontodon nudicaulis (*L.*) *Banks*
Ligusticum scoticum *L.*
Lophiotrema hysterioides *E. & E.*
L. littorale *Speg.*
Marasmius alienus *Pk.*
Melanopsamma confertissima (*Plow.*)
Microcera coccophila *Desm.*
Midotis irregularis (*Schw.*)
Monolepis nuttalliana (*R. & S.*)
Morchella crispa *Karst.*
M. rimosipes *DC.*
Nardia crenulata (*Sw.*) *Lindb.*
N. hyalina (*Lyell*) *Carr.*
Peridermium strobi *Kleb.*
Pezizella lanc.-paraphysata *Rehm*
Phaeopezia fuscocarpa (*E. & H.*)
Pholiota aurivella *Batsch*
Phomopsis stewartii *Pk.*
Picris echinoides *L.*
Polyporus giganteus (*Pers.*) *Fr.*
Psilocybe nigrella *Pk.*
Puccinia epiphylla (*L.*) *Wettst.*
Ribes trist. albinervium (*Mx.*)
Rubia tinctorum *L.*
Rumex pallidus *Bigel.*
Schwalbea americana *L.*
Septoria sedicola *Pk.*
Solidago aspera *Ait.*
Sparganium diversifolium *Graeb.*
Stachys sieboldii *Miq.*
Stephanoma strigosum *Wallr.*
Trametes merisma *Pk.*
Verticillium rexianum *Sacc.*
Volvaria volvacea (*Bull.*) *Fr.*

Not new to the herbarium

Agaricus campester *L.*
A. silvicola *Vitt.*
Agropyrum tenerum *Vasey*
Alnus crispa (*Ait.*) *Pursh*
Amanita frostiana *Pk.*
A. phalloides *Fr.*
Anagallis arvensis *L.*
Angelica atropurpurea *L.*
Antennaria brainerdi *Fern.*
Anthemis cotula *L.*
Arcyria cinerea (*Bull.*) *Pers.*
A. punicea *Pers.*
Arenaria peploides *L.*
Arisaema dracontium (*L.*) *Schott*
Aristida gracilis *Ell.*
Armillaria mellea *Vahl*
Aster ericoides *L.*
A. puniceus *L.*
Atriplex pat. littoralis (*L.*)
Barbarea vulgaris *R. Br.*
Bidens beckii *Torr.*
Boehmeria cylindrica (*L.*) *Sw.*
Bromus altissimus *Pursh*
Caldesiella ferruginosa (*Fr.*)
Calvatia elata (*Mass.*) *Morg.*
C. gigantea (*Batsch*)
Cantharellus infundibuliformis(*Scop.*)
Cardamine bulbosa (*Schreb.*)

Cardamine douglassii (*Torr.*)
Carduus spinosissimus (*Walt.*)
Carex bebbii *Olney*
C. crawfordii *Fern.*
Centaurea solstitialis *L.*
Cerastium viscosum *L.*
Cladosporium typhae *Schw.*
Collybia myriadophylla *Pk.*
C. platyphylla *Fr.*
C. radicata (*Relh.*) *Fr.*
Convallaria majalis *L.*
Coprinus atramentarius (*Bull.*)
C. micaceus (*Bull.*)
Cornus amomum *Mill.*
Corallorrhiza trifida *Chat.*
Crataegus acclivis *S.*
C. anomala *S.*
C. beata *S.*
C. eatoniana *S.*
C. ellwangeriana *S.*
C. grayana *Eggl.*
C. halliana *S.*
C. holmesiana *Ashe*
C. ignea *S.*
C. maineana *S.*
C. menandiana *S.*
C. ovatifolia *S.*
C. persimilis *S.*
C. polita *S.*
C. punctata *Jacq.*
C. repulsans *S.*
C. rotundifolia *Moench*
C. succulenta *Lk.*
C. tenuiloba *S.*
Crepidotus applanatus (*Pers.*)
C. malachius *B. & C.*
Cuscuta arvensis *Beyrich.*
C. cephalanthi *Engelm.*
Cypripedium acaule *Ait.*
Cystopus candidus (*Pers.*) *Lev.*
Daedalea unicolor (*Bull.*) *Fr.*
Erysiphe cichoracearum *DC.*
Erythronium albidum *Nutt.*
Eupatorium purpureum *L.*
Exidia gland. levior *Sacc.*
Exoascus confusus *Atk.*
E. pruni *Fckl.*
E. unilateralis *Pk.*
Fagopyrum tataricum (*L.*) *Gaertn.*
Favolus europaeus *Fr.*
Fimbrystilis castanea (*Mx.*) *Vahl*
Flammula pulchrifolia *Pk.*
Fuligo septica (*Lk.*) *Gmel.*
Fusicladium destruens *Pk.*
Galera lat. albicolor *Pk.*
Galium erectum *Huds.*
Geranium pusillum *Burm. f.*
Geum flavum (*Port.*) *Bickn.*
Gloeoporus conchoidès *Mont.*
Hedeoma hispida *Pursh*
Helenium autumnale *L.*
Hieracium florentinum *All.*
H. gronovii *L.*
H. scabrum *Mx.*
Hybanthus concolor (*Forst.*)
Hypericum canadense *Mx.*
Hypochaeris radicata *L.*
Ilex vert. tenuifolia (*Torr.*) *Wats.*
Iris prismatica *Pursh*
Irpex obliquus (*Schrad.*) *Fr.*
Juncus brachycephalus (*Engelm.*)
J. brevicaudatus (*Engelm.*)
J. secundus *Beauv.*
Juniperus com. depressa *Pursh*
J. horizontalis *Moench*
Lactarius aquifluus *Pk.*
L. glyciosmus *Fr.*
Lactuca scar. integrata *G. & G.*
Laportea canadensis (*L.*) *Gaud.*
Lappula virginiana (*L.*) *Greene*
Leonurus cardiaca *L.*
Listera australis *Lindl.*
Lycoperdon gemmatum *Batsch*
Marasmius acerinus *Pk.*
M. glabellus *Pk.*
M. oreades *Fr.*
Monilia crataegi *Diedicke*
Morus rubra *L.*
Mycena pelianthina *Fr.*
M. pseudopoda (*Pers.*)
M. pseudopura *Cke.*
M. sanguinolenta *A. & S.*
Myosotis virginica (*L.*) *B. S. P.*
Naias gracillima (*A. Br.*) *Magn.*
Oenothera linearis *Mx.*
Omphalia rugosodisca *Pk.*
Onopordon acanthium *L.*
Panicum implicatum *Scribn.*
P. oricola *H. & C.*
P. spretum *Schultes*

Paxillus involutus (*Batsch*) *Fr.*
Peridermium consimile *A. & K.*
Phlox divaricata *L.*
Pholiota angustipes *Pk.*
P. vermiflua *Pk.*
Pilea pumila (*L.*) *Gray*
Plantago decipiens *Braineoud*
Pleurotus ulmarius (*Bull.*) *Sow.*
Pluteus admirabilis *Pk.*
P. cervinus (*Schaeff.*) *Fr.*
P. granularis *Pk.*
P. nanus (*Pers.*) *Fr.*
Polygonum avic. littorale (*Lk.*)
Polyporus elegans *Fr.*
P. sulphureus (*Bull.*) *Fr.*
Potamogeton richardsoni (*Benn.*)
Prunus pumila *L.*
Puccinia coronata *Cda.*
P. rubigo-vera (*DC.*) *Wint.*
P. veratri *Niessl.*
Pyrus coronaria *L.*
P. melanocarpa (*Mx.*) *Willd.*
Quercus macrocarpa *Mx.*
Radicula pal. hispida (*Desv.*)
Ranunculus delphinifolius *Torr.*
R. reptans *L.*
Roestelia aurantiaca *Pk.*
Rubus andrewsianus *Blanch.*
R. permixtus *Blanch.*
R. recurvans *Blanch.*
Russula brevipes *Pk.*
R. lepida *Fr.*
R. mariae *Pk.*
Sanicula canadensis *L.*
Sedum ternatum *Mx.*
Silybium marianum (*L.*) *Gaertn.*
Sisymbrium altissimum *L.*
S. sophia *L.*
Solanum dulcamara *L.*
S. nigrum *L.*
Solidago neglecta *T. & G.*
S. squarrosa *Muhl.*
Sparganium americanum *Nutt.*
S. angustifolium *Mx.*
Spiraea latifolia *Borkh.*
Stachys arenicola *Britton*
Suaeda maritima (*L.*) *Dumort.*
Thalictrum confine *Fern.*
T. dasycarpum *F. & L.*
T. revolutum *DC.*
Thelephora terrestris *Ehrh.*
Trametes suaveolens (*L.*) *Fr.*
Tricholoma album (*Schaeff.*) *Fr.*
Trichothecium roseum (*Pers.*) *Lk.*
Trillium grand. variegatum *Pk.*
Tripsacum dactyloides *L.*
Urtica lyellii *Wats.*
Ustilago longissima (*Sow.*) *Tul.*
Ustulina vulgaris *Tode*
Vaccinium pennsylvanicum *Lam.*
Veronica humifusa *Dicks.*
V. tournefortii *Gmel.*
Verticillium lactarii *Pk.*
Vicia angustifolia (*L.*) *Reich.*
Viola rafinesquii *Greene*
V. renifolia *Gray*
V. sororia *Willd.*
V. triloba *Schw.*
Vitis vulpina *L.*
Zizania palustris *L.*
Zizia aurea (*L.*) *Koch.*

CONTRIBUTORS AND THEIR CONTRIBUTIONS

Miss L. C. Allen, Newtonville, Mass.
Bovistella ohiensis *E. & M.*

Miss H. C. Anderson, Lambertville, N. J.
Morchella gigas (*Batsch*) *Fr.*

Miss F. Beckwith, Rochester
Bidens tenuisecta *Gray*
Chaenactis stevioides *H. & A.*
Erodium cicutarium (*L.*) *L'Her.*
Geranium pusillum *Burm. f.*
Monolepis nuttalliana (*R. & S.*)
Sisymbrium sophia *L.*
Viola sororia *Willd.*

Mrs E. B. Blackford, Boston, Mass.

Cortinarius acutoides *Pk.*
C. lutescens *Pk.*
Lactarius hysginus *Fr.*
Russula blackfordae *Pk.*
Russula serissima *Pk.*

Mrs H. C. Davis, Falmouth, Me.

Bovista pila *B. & C.*
Crucibulum vulgare *Tul.*
Mutinus caninus (*Huds.*) *Fr.*
Rhizina inflata (*Schaeff.*) *Quel.*
A set of colored drawings representing about 150 species of fleshy fungi from Maine

Mrs E. P. Gardner, Canandaigua

Trillium grandiflorum variegatum *Pk.*

Mrs L. L. Goodrich, Syracuse

Arisaema dracontium (*L.*) *Schott*
Sisymbrium altissimum *L.*
Veronica tournefortii *C. C. Gmeln.*

Mrs C. W. Harris, Washington, D. C.

Baeomyces roseus *Pers.*
Cetraria oakesiana *Tuckm.*
Cladonia caespiticia (*Pers.*) *Fl.*
C. cristatella *Tuckm.*
C. mitrula *Tuckm.*
C. papillaria (*Ehrh.*) *Hoffm.*
C. pyxidata (*L.*) *Fr.*
C. rangiferina (*L.*) *Hoffm.*
C. verticillata *Fr.*
Parmelia borreri rudecta *Tuckm.*
P. caperata (*L.*) *Ach.*
P. conspersa (*Ehrh.*) *Ach.*
P. perlata (*L.*) *Ach.*
P. physodes (*L.*) *Ach.*
P. saxatilis (*L.*) *Fr.*
Peltigera aphthosa (*L.*) *Hoffm.*
Peltigera canina (*L.*) *Hoffm.*
P. polydactyla (*Neck.*)
Physcia aquila detonsa *Tuckm.*
P. caesia (*Hoffm.*) *Nyl.*
P. obscura (*Ehrh.*) *Nyl.*
P. obsc. endochrysea *Nyl.*
P. stellaris (*L.*) *Tuckm.*
P. stell. aipolia *Nyl.*
Pyxine sorediata *Fr.*
Ramalina calic. fastigiata *Fr.*
Sticta amplissima (*Scop.*) *Mass.*
S. pulmonaria (*L.*) *Ach.*
Umbilicaria dillenii *Tuckm.*
U. muhlenbergii (*Ach.*)
Umbilicaria pustulata papulosa *Tuckm.*

Miss A. Hibbard, West Roxbury, Mass.

Boletinus glandulosus *Pk.*
Boletus miniato-olivaceus *Frost*
Gomphidius nigricans *Pk.*
Stropharia depilata *Pers.*
Tricholoma acre *Pk.*

Miss D. Hone, Minneapolis, Minn.

Polyporus isidioides *Berk.*
Polyporus obtusus *Berk.*

Miss A. Lorenz, Hartford, Conn.

Marsupella robusta (*DeNot.*) *Evans*
M. sullivantii (*DeNot.*)
Nardia crenulata (*Sm.*) *Lindb.*
N. hyalina (*Lyell*) *Carr.*

Miss H. L. Palliser, Poughkeepsie

Boletus viridarius *Frost*

Dr C. E. Putnam, St Paul, Minn.
Secotium acuminatum *Mont.*

Miss M. L. Sutliff, Sacramento, Cal.
Rhizopogon rubescens *Tul.*

Mrs M. E. Williams, Wernersville, Pa.
Leskea gracilescens *Hedw.*

J. C. Arthur, Lafayette, Ind.
Puccinia grindeliae *Pk.*

A. D. Baker, Auburn
Centaurea solstitialis *L.*

C. F. Baker, Claremont, Cal.

Agaricus bivelatus *Pk.*
A. solidipes *Pk.*
A. subnitens *Pk.*
Amanita bivolvata *Pk.*
A. calyptratoides *Pk.*
A. ocreata *Pk.*
A. virosa *Fr.*
Amanitopsis velosa *Pk.*
Armillaria subannulata *Pk.*
Boletus tomentipes *Earle*
Clitocybe microspora *Pk.*
C. sphaerospora *Pk.*
Collybia albogrisea *Pk.*
Coprinus calyptratus *Pk.*
Cortinarius multiformis *Fr.*
Hebeloma foedatum *Pk.*
H. ischnostylum *Cke.*
Hypholoma campanulata *Pk.*
H. cutifracta *Pk.*
Inocybe bakeri *Pk.*
I. bulbosa *Pk.*
Lactarius rufulus *Pk.*
L. theiogalus (*Bull.*)
Leptonia edulis *Pk.*
Mycena atroalboides *Pk.*
M. elegantula *Pk.*
M. haematopoda (*Pers.*) *Fr.*
Naucoria platysperma *Pk.*
N. vinicolor *Pk.*
Pluteolus luteus *Pk.*
Psathyrella graciloides *Pk.*
Psilocybe castanella *Pk.*
Russula semicrema *Fr.*
Tricholoma equestre (*L.*) *Fr.*
Tubaria furfuracea (*Pers.*) *Fr.*

H. J. Banker, Greencastle, Ind.

Onygena equina *Pers.*
Polyporus sulphureus (*Bull.*) *Fr.*
Xylaria pedunculata (*Dicks.*) *Fr.*

H. W. Barratt, Poughkeepsie
Coprinus atramentarius (*Bull.*) *Fr.*

E. Bartholomew, Stockton, Kan.

Barlaea subaurantia *B. & R.*
Bjerkandera adusta (*Willd.*) *Karst.*
Botrytis uredinicola *Pk.*
Bubakia crotonis (*Cke.*) *Arth.*
Ceratophorum uncinatum (*Clint.*)
Cercospora biformis *Pk.*
C. brunnea *Pk.*
C. flagellaris *E. & M.*
C. fuscovirens *Sacc.*
C. mississippiensis *T. & E.*
C. rhoina *C. & E.*
C. rubi *Sacc.*
C. simulata *E. & E.*
C. sordida *Sacc.*
C. vignae *E. & E.*
Clavaria aurea *Schaeff.*
Coleosporium elephantopodis (*Schw.*)
C. ipomoeae (*Schw.*) *Burr.*
C. laciniariae *Arth.*
C. solidaginis (*Schw.*)
C. vernoniae *B. & C.*
Coriolus prolificans (*Fr.*) *Murr.*
C. versicolor (*L.*) *Quel.*
Corticium roseolum *Mass.*
Cylindrosporium padi *Karst.*
Daedalea aesculi (*Schw.*) *Murr.*
Darluca filum (*Biv.*) *Cast.*
Diatrype stigma (*Hoffm.*) *Fr.*
Fusarium bartholomaei *Pk.*
F. juglandinum *Pk.*
Ganoderma curtisii (*Berk.*) *Murr.*
Gyroceras divergens *Pk.*
Hapalopilus gilvus (*Schw.*) *Murr.*
Helminthosporium hamatellum *Pk.*
Herpotrichia rhodospiloides *Pk.*
Hirneola auricula-judae (*L.*)
Hydnoporia fuscescens (*Schw.*) *Murr.*
Hypoxylon multiforme *Fr.*
Irpiciporus lacteus (*Fr.*) *Murr.*
Kuehneola albida (*Kuehn.*) *Magn.*
Lenzites betulina (*L.*) *Fr.*
Lycoperdon atropurpureum *Vitt.*
L. pulcherrimum *B. & C.*
Melampsora bigelowii *Thuem.*
M. medusae *Thuem.*
Microsphaera alni (*Wallr.*) *Salm.*
Nectria cinnabarina (*Tode*) *Fr.*
Nummularia repanda (*Fr.*) *Nits.*
Ozonium auricomum *Link*
Peniophora quercina (*Fr.*) *Cke.*
Phlebia radiata *Fr.*
Phyllosticta smilacis *E. & M.*
Piggotia fraxini *B. & C.*
Pileolaria toxicodendri (*B. & R.*)
Puccinia helianthi *Schw.*
P. lateripes *B. & R.*
P. lobeliae *Ger.*
P. menthae americana *Pk.*
P. Muhlenbergiae *A. & H.*
P. polygoni-amphibii *Pers.*
P. smilacis *Schw.*
P. xanthii *Schw.*
Pucciniastrum agrimoniae (*Schw.*)
P. hydrangeae (*B. & C.*)
P. myrtilli (*Schw.*)
Rhysotheca halstedii (*Farl.*)
Schizophyllum commune *Fr.*
Scleroderma tenerum *B. & C.*
Septoria musiva *Pk.*
S. populi *Desm.*
S. rubi *West.*
S. scrophulariae *Pk.*
Sorosporium ellisii *Wint.*
Sphaerella fraxinicola (*Schw.*)
Sphaeria potentillae *Schw.*
Stereum acerinum nivosum *Berk.*
S. complicatum *Fr.*
S. curtisii *Berk.*
S. spadiceum *Fr.*
S. versicolor (*Sw.*) *Fr.*
Stigmina platani (*Fckl.*) *Sacc.*
Thelephora rosella *Pk.*
Tranzschelia punctata (*Pers.*)
Uncinula parvula *C. & P.*
Uromyces andropogonis *Tracy*
U. appendiculatus (*Pers.*)
U. aristidae *E. & E.*
U. euphorbiae *C. & P.*
U. hedysari-paniculata (*Schw.*)
U. lespedezae (*Schw.*) *Pk.*
U. spermacocis (*Schw.*) *Curt.*
Valsaria nigrospora (*Pk.*) *B. & V.*

J. B. Bartlett, Albany

Sterigmatocystis ochracea (*Wilh.*) *VanTigh.*

F. S. Boughton, Pittsford

Hypholoma boughtoni *Pk.*
Volvaria volvacea (*Bull.*) *Fr.*

S. H. Burnham, Sandy Hill

Alnus crispa (*Ait.*) *Pursh*
Anthemis cotula *L.*
Aster divaricatus *L.*
A. macrop. velutinus *Bu.*
Carduus crispus *L.*
Ceratiomyxa fruticulosa (*Muell.*)
Cladosporium herbarum (*Pers.*) *Fr.*
Clitocybe candida *Bres.*
C. trullisata *Ellis*
Collybia platyphylla *Fr.*
Coprinus insignis *Pk.*
Corticium cremicolor *B. & C.*
C. lacteum *Fr.*
Cortinarius rimosus *Pk.*
C. subsalmoneus *Kauff. Ms.*
C. validipes *Pk.*
Diplocladium penicilloides *Sacc.*
Eutypella cerviculata (*Fr.*) *Sacc.*
Flammula pulchrifolia *Pk.*
F. spumosa *Fr.*
Fomes pinicola (*Sw.*) *Fr.*
Geum flavum (*Port.*) *Bickn.*
Gloeosporium irregulare *Pk.*
Helvella palustris *Pk.*
Hydnum laciniatum *Leers*
Hypocrea aurantiaca *Pk.*
Hypomyces lactifluorum (*Schw.*)
H. torminosus (*Mont.*) *Tul.*
Julella monosperma (*Pk.*) *Sacc.*
Lactarius cinereus *Pk.*
L. subdulcis (*Bull.*) *Fr.*
Lecanora rubina (*Vill.*) *Ach.*
Massaria vomitoria *B. & C.*
Peridermium conorum-piceae (*Rees*)
Peronospora parasitica (*Pers.*)
Piggotia astroidea *B. & Br.*
Polyporus chioneus *Fr.*
Psilocybe uda (*Pers.*) *Fr.*
Pucciniastrum potentillae *Kom.*
Rubia tinctorum *L.*
Rubus permixtus *Blanch.*
Russula aeruginea *Fr.*
R. decolorans *Fr.*
Sanicula canadensis *L.*
Sparganium diversifolium *Griseb.*
Stachys arenicola *Britt.*
S. sieboldii *Miq.*
Trametes sepium *Berk.*
T. suaveolens (*L.*) *Fr.*
Tricholoma transmutans *Pk.*
Vaccinium pennsylvanicum *Lam.*
Zygodesmus fuscus *Corda*

I. O. Cross, Hoosick Falls

Fusicladium dendriticum (*Wallr.*) *Fckl.*

S. Davis, Boston, Mass.

Clavaria lavendula *Pk.*
C. pallescens *Pk.*
Clitocybe brumalis *Fr.*
C. compressipes *Pk.*
Clitopilus davisii *Pk.*
Eccilia watsoni *Pk.*
Entoloma griseo-cyaneum *Fr.*
E. sericeum *Fr.*
E. variabile *Pk.*
Galera later. albicolor *Pk.*
Gomphidius maculatus (*Scop.*) *Fr.*
Inocybe hiulca *Fr.*
I. infelix brevipes *Pk.*
Marasmius varicosus *Fr.*
Mycena pseudopura *Cke.*
Naucoria firma *Pk.*
N. sphagnophila *Pk.*
Nolanea conica *Pk.*
Omphalia pyxidata (*Bull.*) *Fr.*
Pholiota autumnalis *Pk.*

J. Dearness, London, Can.

Clasterosporium caricinum *Schw.*
Entyloma linariae *Schroet.*
Hypocrella hypoxylon (*Pk.*)
Isariopsis albo-rosella (*Desm.*)
Leptothyrium punctiforme *B. & C.*
Marsonia potentillae (*Desm.*)
Microstroma juglandis (*Bereng.*)
Peridermium conorum-piceae (*Rees*)
Puccinia caricis-asteris *Arth.*
Sphaerotheca humuli (*DC.*) *Burr.*

F. Dobbin, Shushan

Hedeoma hispida *Pursh*
Stellaria borealis *Bigel.*

C. J. Elting, Highland

Centaurea solstitialis *L.*

C. E. Fairman, Lyndonville

Belonidium glyceriae *Pk.*
Cantharellus floccosus *Schw.*
Ciboria luteo-virescens *R. & D.*
Diplodia cercidis *E. & E.*
D. hamamelidis *Fairm.*
D. tamariscina *Sacc.*
Fenestella amorpha *E. & E.*
Helotium salicellum *Fr.*
Lycogala flavo-fuscum (*Ehrh.*) *Rost.*
Lophiotrema hysterioides (*E. & L.*)
Lophiotrema littorale *Speg.*
Melanopsamma confertissima (*Plow.*)
Microsphaera diffusa *C. & P.*
Ovularia obliqua (*Cke.*) *Oud.*
Pezizella lanc.-paraphysata *Rehm*
Phialea scutula (*Pers.*) *Gill.*
Polyporus sulphureus (*Bull.*) *Fr.*
Puccinia epiphylla (*L.*) *Wettst.*
Stephanoma strigosum *Wallr.*
Trichosporium variabile *Pk.*

G. C. Fisher, DeFuniak Springs, Fla.

Bovistella floridensis *Pk.*
Peridermium pyriforme *Pk.*

W. P. Fraser, Pictou, Can.

Calicium lenticulare (*Hoffm.*) *Ach.*
Cenangium populneum (*Pers.*) *Rehm*
Dothidella kalmiae (*Pk.*) *Sacc.*
Gnomoniella coryli (*Batsch*) *Sacc.*
Lycopodium sabinaefolium *Willd.*
L. sitchense *Rupr.*
Ramularia dubia *Riess*
Septogloeum salicinum (*Pk.*) *Sacc.*
Venturia pulchella *C. & P.*

C. Gaffin, Utica

Volvaria bombycina (*Pers.*) *Fr.*

H. Garman, Lexington, Ky.

Pholiota vermiflua *Pk.*

S. J. Greenfield, Ilion

Panaeolus retirugis *Fr.*

J. G. Grossenbacher, Geneva

Cryptosporium cerasinum *Pk.*

M. E. Hard, Kirkwood, Mo.

Laternea columnata *Nees*

E. T. Harper, Chicago, Ill.

Corticium mutatum *Pk.*
Diaporthe aucupariae *Hazsl.*
Diplodina fusispora *Pk.*
Dothiorella celastri *Pk.*
Fusarium pyrochroum (*Desm.*) *Sacc.*
Helminthosporium macrocarpum *Grev.*
Macrophoma samaricola *Sacc.*
Myxosporium acerinum *Pk.*
Phoma lebiseyi *Sacc.*
P. menispermi *Pk.*
P. platysperma *Pk.*
Sphaeropsis simillima *Pk.*
Stagonospora linearis *Pk.*
Stemphylium macrosporoideum (*B. & C.*)

O. Hill, Boston, Mass.

Agaricus halophilus *Pk.*
Hypholoma rigidipes *Pk.*
Tricholoma subcinereum *Pk.*

G. T. Howell, Rockville, Ind.

Flammula praecox *Pk.*
Flammula pulchrifolia *Pk.*
Lepiota granosa *Morg.*

G. Jericho, Albany

Calvatia cyathiformis (*Bosc*) *Morg.*

C. E. Jones, Albany

Prunus pumila *L.*

M. E. Jones, Salt Lake City, Utah

Actinonema rosae (*Lib.*) *Fr.*
Ascochyta colorata *Pk.*
Cylindrosporium padi cerasinum (*Pk.*)
C. simile *Pk.*
Dimerosporium collinsii (*Schw.*)
Doassansia alismatis (*Nees*)
D. sagittariae (*West.*)
Erysiphe polygoni *DC.*
Linospora brunellae *E. & E.*
Macrosphaera alni ludens *Salm.*
M. diffusa *C. & P.*
Phyllosticta angelicae *Sacc.*
Physoderma vagans *Schroet.*
Septoria sacch. occidentalis *E. & E.*
S. sorbi *Lasch*
S. streptopodis *Pk.*
Sphaerotheca humuli (*DC.*) *Burr.*

R. Latham, Orient Point

Angelica atropurpurea *L.*
Arenaria peploides *L.*
Aristida gracilis *Ell.*
Atriplex pat. littoralis (*L.*)
Cerastium viscosum *L.*
Cirsium spinosissimum (*Walt.*)
Cyperus nuttallii *Eddy*
Fimbristylis castanea (*Mx.*) *Vahl*
Fomes rimosus *Berk.*
Hieracium gronovii *Mx.*
H. scabrum *Mx.*
Hypericum canadense *L.*
Hypochaeris radicata *L.*
Ilex vert. tenuifolia (*Torr.*)
Iris prismatica *Pursh*
Leontodon nudicaulis (*L.*) *Banks*
Ligusticum scoticum *L.*
Myosotis virginica (*L.*) *B. S. P.*
Onopordum acanthium *L.*
Panicum spretum *Schultes*
Picris echioides *L.*
Plantago decipiens *Barneoud*
Polygonum littorale *Link*
Rumex pallidus *Bigel.*
Salsola kali *L.*
Silybum marianum (*L.*) *Gaertn.*
Solidago aspera *Ait.*
Strophostyles helvola (*L.*)
Tripsacum dactyloides *L.*

J. Mickleborough, Brooklyn
Myxosporium castaneum *Pk.*

A. J. Miller, Rensselaer
Nuts of Phytelephas macrocarpa *R. & P.*

G. E. Morris, Waltham, Mass.

Amanita morrisii *Pk.*
A. muscaria *L.*
A. russuloides *Pk.*
Boletinus grisellus *Pk.*
Boletus morrisii *Pk.*
B. spectabilis *Pk.*
Calocera cornea *Fr.*
Clitocybe centralis *Pk.*
C. metachroa *Fr.*
Coprinus niveus (*Pers.*) *Fr.*
Cortinarius ferrug.-griseus *Pk.*
Eccilia flavida *Pk.*
Eccilia pyrina *B. & C.*
Entoloma cuspidatum *Pk.*
E. jubatum *Fr.*
E. rhodopolium *Fr.*
E. salmoneum *Pk.*
Geoglossum nigritum *Pers.*
Hydnum graveolens *Delast.*
H. laevigatum *Sw.*
Lactarius bryophilus *Pk.*
Leotia punctipes *Pk.*
Russula serissima *Pk.*
Tricholoma piperatum *Pk.*

W. A. Murrill, New York

Hypholoma boughtoni *Pk.*
Inocybe infida *Pk.*

H. S. Paine, Glens Falls
Pholiota duroides *Pk.*

C. R. Pettis, Lake Clear Junction
Peridermium strobi *Kleb.*

H. G. Pierce, Rochester
Salix alba *L.*

E. Riesel, Herkimer
Cuscuta arvensis *Beyrich*

W. H. Ropes, Salem, Mass.

Lepiota americana *Pk.*
Lepiota cepaes. lutea (*Bolt.*)
Lepiota friesii *Lasch.*

J. C. Smock, Hudson

Bidens beckii *Torr.*
Erythronium albidum *Nutt.*
Hybanthus concolor (*Forst.*)
Schwalbea americana *L.*

P. Spaulding, Washington, D. C.
Peridermium strobi *Kleb.*

E. B. Sterling, Trenton, N. J.

Agaricus eludens *Pk.*
Agaricus magniceps *Pk.*

F. C. Stewart, Geneva

Erysiphe cichoracearum *DC.*
Fomes ribis (*Schum.*) *Fr.*
Hypholoma perplexum *Pk.*
Microcera coccophila *Desm.*
Phomopsis stewartii *Pk.*

H. L. True, McConnelsville, O.

Polyporus flavovirens *B. & R.*
Xylaria digitata (*L.*) *Grev.*

B. D. VanBuren & S. H. Burnham, Albany

Collybia velutipes (*Curt.*) *Fr.*

J. M. VanHook, Greencastle, Ind.

Hydnum laciniatum *Leers*

H. Wardell, Middleburg

Lappula virginiana (*L.*) *Greene*

H. L. Wells, New Haven, Conn.

Agaricus rodmani *Pk.*

F. B. Wheeler, Syracuse

Morchella crispa *Karst.*
Morchella rimosipes *DC.*
Pholiota aurivella *Batsch*

H. H. Whetzel, Ithaca

Ascochyta solani-nigri *Diedicke*

T. E. Wilcox, Washington, D. C.

Amanita flavorubescens *Atk.*

D. B. Young, Albany

Amanitopsis vaginata (*Bull.*) *Roze*
Boletus albus *Pk.*
B. piperatus *Bull.*
Eccilia atrides *Lasch.*
Entoloma salmoneum *Pk.*
Lactarius deliciosus *Fr.*
L. oculatus (*Pk.*) *Burl.*
Russula fragilis (*Pers.*) *Fr.*
Sporotrichum larvatum *Pk.*

SPECIES NOT BEFORE REPORTED

Ascochyta solani-nigri Diedicke

Living leaves of egg plant, Solanum melongena L. Ithaca. October. H. H. Whetzel.

Agropyrum tenerum Vasey

Brownsville, Jefferson co. and Adirondack mountains. June and July. Formerly confused with Agropyrum violaceum Lange.

Belonidium glyceriae n. sp.

Receptacle 1–1.5 mm broad, gregarious, sessile, plane or convex, glabrous or merely papillate on the under side, pale yellow; asci subclavate or subfusiform, obtuse, 120–130 x 14–18 μ; spores oblong or subcylindric, straight or slightly curved, 3-septate, often 4-nucleate, crowded or biseriate, 35–40 x 4–5 μ, paraphyses filiform.

Dead culms of Glyceria nervata (Willd.) Trin. Lyndonville, Orleans co. June. C. E. Fairman.

Receptaculum 1–1.5 mm latum, gregarium, sessile, planum convexumve, extus glabrum seu papillatum, flavidum; asci subclavati vel subfusiformes, obtusi, 120–130 x 14–18 μ; sporae oblongae vel subcylindraceae, rectae vel leviter curvae, 3-septatae, saepe 4-nucleatae, confertae vel distichae, 35–40 x 4–5 μ, paraphyses filiformes.

Biatora cupreo-rosella (Nyl.) Tuckm.

Limestone rocks. Pine Island, Orange co. November. C. F. Austin.

Bidens tenuisecta Gray

Field near Rochester. August. Miss F. Beckwith. Probably a recent introduction from the West.

Boletus viridarius Frost

Grassy places near pine trees. Poughkeepsie. September and October. Miss H. L. Palliser. For description of this species see article on "Edible fungi" in another part of this report.

Bromus altissimus Pursh

Rathbone, Steuben co. and North Greenbush, Rensselaer co. August to October. Formerly confused with Bromus ciliatus L.

Cardamine douglasii (Torr.) Britton

Niagara Falls and Syracuse. May. Formerly referred to Cardamine rhomboidea purpurea Torr., but now recognized as a distinct species.

Carduus crispus L.

Fields. Helderberg mountains. October. S. H. Burnham. A recently introduced plant, very spiny but beautiful.

Carex bebbii Olney

Common. Formerly considered a variety of Carex tribuloides Wahl., but now recognized as a distinct species.

Carex crawfordii Fern.

Common. Previously known as Carex scoparia minor Boott, but raised to specific rank in the New Manual.

Chaenactis stevioides H. & A.

Newly seeded lawn. Rochester. Miss F. Beckwith. Probably a recent introduction from the West.

Ciboria luteo-virescens R. & D.

On petioles of fallen maple leaves. Lyndonville. C. E. Fairman.

Clitocybe candida Bres.

Woods. West Fort Ann, Washington co. October. S. H. Burnham. The pileus in these specimens is not a pure white as might be inferred from the specific name, but is tinged in the center with yellowish or grayish brown hues. It is also sometimes eccentric.

Cortinarius subsalmoneus Kauffm. Ms.

Woods. Hague, Warren co. September. S. H. Burnham. The full description of this species has not yet been published, but the specimens agree with those characters published in the *Key to the Species of Cortinarius* and in the author's manuscript description.

Crataegus brevipes n. sp.

Leaves ovate or broadly ovate, acute, rounded or broadly cuneate at the base, with 2–3 very slight broad lobes each side or scarcely lobed, with marginal teeth short, broad and blunt, glabrous except

a few hairs on the upper surface of the midrib near the base, slightly bronze tinged when unfolding, soon green or yellowish green, paler beneath, becoming darker green and firm, those on vigorous shoots larger, subcoriaceous, more distinctly lobed, and broadly rounded or subtruncate at the base, petioles short, 6–12 mm long, slightly margined at the top, nearly or quite glandless.

Flowers 5–10 in a cluster, 1.6–2.4 mm broad, commonly on simple glabrous pedicels 6–12 mm long, calyx lobes irregular, often abruptly narrowed toward the reddish apex, entire or with few marginal glands, slightly hairy inside; stamens 8–10, anthers pink; styles 3–4.

Fruit erect, globose or depressed globose, 1–1.4 cm long, 1.2–1.4 cm broad, angular, scarcely or not at all pruinose, 3–8 in a cluster, supported on short glabrous pedicels, dull red or blotched with green, nutlets 3–4, 7–8 mm long.

A shrub 2–3 m tall, with wide spreading branches armed with stout, nearly straight spines 2.5–4 cm long. Flowers the last week in May. Fruit ripe the latter part of September.

Rocky hilly places. Corning, Steuben co. The species evidently belongs to the Pruinosae group, though the fruit is not distinctly pruinose. The specific name has reference to the short pedicels, by which character the species is distinguished from all others of this group known to me.

Folia ovata vel late ovata, acuta, basi rotundata vel late cuneata, utrique 2–3 lobata, seu vix lobata, dentibus brevibus, latis, obtusis, margine serrata, glabra, nisi pilis paucis in venis ad basem, juventate leviter rufobrunnea, mox viridia, infra pallidora, in maturitate virescentiora et subcoriacea, petiolae 6–12 mm longae, ad apicem leviter marginatae fere eglandulosae.

Flores 5–10 in corymbo, 1.6–2.4 cm latae, in pedicellis glabris, vulgo simplicibus, 6–12 mm longis, calicis lobi irregulares, saepe ad apicem abrupte angustati et rubri, integri vel glandis paucis, intra leviter hirti, stamines 8–10, antherae rosaceae; styles 3–4.

Poma 1–1.4 cm longa, 1.2–1.4 lata, angularia, epruinosa, brevibus glabris erectis pedicellis suffulta, sanguinea, nuculae 3–4, 7–8 mm longae.

Diplocladium penicilloides Sacc.

Decaying specimens of Polyporus resinosus (Schrad.) Fr. Helderberg mountains. May. S. H. Burnham.

Diplodia cercidis E. & E.

Dead branches of cultivated Cercis japonica Sieb. Lyndonville. July. C. E. Fairman.

Diplodia hamamelidis n. sp. Fairm. in litt.

Perithecia gregarious, minute, depressed globose, black, at first covered by the epidermis, then erumpent; spores at first colorless, then colored, for a long time continuous, finally uniseptate, 20–28 x 10–12 μ.

Dead branches of witch hazel, Hamamelis virginiana L. Lyndonville. September. C. E. Fairman.

Perithecia gregaria, minuta, depresso-globosa, nigra, primus epidermide tecta, deinde erumpentia; sporae primus hyalinae, deinde coloratae, diu continuae, denique uniseptatae, 20–28 x 10–12 μ.

Diplodia tamariscina Sacc.

Dead branches of cultivated Tamarix parviflora DC. Lyndonville. July. C. E. Fairman.

Discina leucoxantha Bres.

Ground, under beech trees. Altamont, Albany co. May.

Dothiorella divergens n. sp.

Clusters of perithecia 1–3 mm broad, seated on or immersed in a black stroma, suborbicular or elliptic, erumpent, surrounded by the ruptured epidermis; perithecia irregular, unequal, submembranous, black, pallid within; spores oblong, obtuse, straight or slightly curved, sometimes uninucleate, hyaline rarely becoming greenish or yellowish, 20–30 x 9–10 μ.

Dead branches of apple tree, Pyrus malus L. Menands, Albany co. May.

This species differs from Dothiorella mali E. & E. and D. pyrenophora Karst. & Sacc. in its much larger spores. It diverges from the generic character in sometimes having spores slightly tinged with green or yellow.

Caespites peritheciorum 1–3 mm lati, insidentes stromate nigro, suborbiculares seu ellipsoidei, erumpentes, epidermide rupta circumdati; perithecia irregularia, inaequalia, submembranacea, atra, intus pallida; sporae oblongae, obtusae, rectae, vel leviter curvae, aliquando uninucleatae, hyalinae, rare viridescentes seu flavescentes, 20–30 x 8–10 μ.

Epipactis tesselata (Lodd.) Eaton

Woods. Gansevoort, Saratoga co. August.

Fenestella amorpha E. & E.

Dead branches of hickory. Lyndonville. July. C. E. Fairman.

Geum flavum (Port.) Bickn.

Greenburg, Westchester co. E. C. Howe. Shushan, Washington co. September. S. H. Burnham.

Hypholoma boughtoni n. sp.

PLATE II, FIG. 1–7

Pileus fleshy, thin except in the center, broadly convex or subhemispheric, rarely with a slight umbo, glabrous or slightly fibrillose, often concentrically and areolately cracking, pale reddish brown or grayish brown, flesh whitish, taste disagreeable; lamellae unequal, moderately close, adnate, purplish brown, seal brown or blackish, obscurely spotted, whitish on the edge; stem equal, floccosely fibrillose, striate at the top, hollow, white or whitish; spores black on white paper, broadly elliptic, apiculate, 10–12 x 7–8 μ.

Pileus 2.5–7 cm broad; stem 2.5–6 cm long, 4–10 mm thick.

Ground in woods and in open places. Near Pittsford, Monroe co. and at Menands. August. F. S. Boughton and C. H. Peck.

This species is closely allied to Hypholoma velutinum (Pers.) Fr. from which it may be separated by its dry, not hygrophanous, pileus, its whitish flesh and stem, the absence of cystidia and the larger spores. The spore print of both this and Hypholoma rigidipes Pk. is black on white paper. This would indicate a close relationship to the Melanosporae, not only of these two species, but probably also of the closely related species H. velutinum (Pers.) Fr. and H. lacrymabundum Fr.

Pileus carnosulus, centro excepto, late convexus vel subhemisphaericus, rare subumbonatus, glaber vel subglaber, saepe rimosus, rufo-brunneus vel griseo-brunneus, carne albida, sapore ingrato; lamellae inaequales, subconfertae, adnatae, obscure maculatae, purpureo-brunneae, atro-brunneae vel nigrescentes, acie albida; stipes aequalis, floccoso-fibrillosus, ad apicem striatus, cavus, albidus; sporae in fundamento candido atrae, late ellipsoideae, apiculatae, 10–12 x 7–8 μ.

Hypholoma rigidipes n. sp.

PLATE III, FIG. 1–6

Pileus fleshy, thin, convex or broadly convex, dry, fibrillose-squamulose, tawny brown (raw umber), often reddish in the center, flesh whitish, odor slight or none, taste mild; lamellae narrow, close, slightly sinuate, adnexed, brownish red becoming black or purplish black with age; stem slender, rigid, equal, hollow, fibrillose squamulose, colored like the pileus or a little paler; spores subellipsoid, apiculate, 10–12 x 6–8 μ.

Pileus 2.5–5 cm broad; stem 5–10 cm long, 4–6 mm thick.

Gregarious. Damp places under tall herbs. North River, Warren co. September.

This is closely related to Hypholoma lacrymabundum Fr. from which it may be separated by its smaller size, gregarious mode of growth, slender, rigid, equal, darker colored stem, larger spores and slight evanescent veil.

Pileus carnosulus, convexus vel late convexus, siccus, fibrilloso-squamulosus, umbrinus, saepe in centro rubescens, carne albida, sapore mite; lamellae angustae, confertae, adnexae leviter sinuatae, rufo-brunneae, deinde purpureo-atrae vel nigrescentes; stipes gracilis, rigidus, aequalis, cavus, fibrilloso-squamulosus, pileo in colore similis; sporae subellipsoideae, apiculatae, 10–12 x 6–8 μ.

Juncus brachycephalus (Engelm.) Buchen.

Jamesville, Onondaga co. and Sevey, St Lawrence co. July and August. Formerly reported as a variety of Juncus canadensis Gay.

Juncus brevicaudatus (Engelm.) Fern.

West Albany, Sand Lake and Adirondack mountains. August and September. Formerly reported as a variety of Juncus canadensis Gay.

Juncus secundus Beauv.

Blue Mountain Lake, Hamilton co. August. Reported as a variety of Juncus tenuis Willd.

Juniperus horizontalis Moench

Bergen swamp, Genesee co. Formerly reported as a variety of Juniperus sabina L.

Leontodon nudicaulis (L.) Banks

Orient Point, Suffolk co. September. R. Latham.

Leskea gracilescens Hedw.

Trunks of trees. Kingston. July. Mrs M. E. Williams.

Ligusticum scoticum L.

Orient Point. September. R. Latham.

Lophiotrema hysterioides E. & E.

Decorticated twigs and branches lying on the ground in woods. Lyndonville. September. C. E. Fairman.

Lophiotrema littorale Speg.

Dead branches of willow. Lyndonville. May. C. E. Fairman.

Marasmius alienus n. sp.

Pileus thin, tough, convex, subpruinose, dry, pallid or pale buff, with a thin straight margin; lamellae subarcuate, distant, slightly decurrent, creamy yellow, becoming brownish in drying; stem slender, firm, hollow, subpruinose, pallid; spores oblong or narrowly elliptic, 8–10 x 4–5 μ.

Pileus 6–12 mm broad; stem 2.5–5 cm long, .5–1 mm thick.

Mossy prostrate trunks of trees in woods. Fine, St Lawrence co. August.

This species belongs to section 3, subsection 2, of Professor Morgan's *Synopsis of North American Species of Marasmius.*

Pileus tenuis, lentus, convexus, subpruinosus, siccus, pallidus vel subluteolus, margine tenue, recto; lamellae subarcuatae, distantes, leviter decurrentes, cremeae, in siccitate brunnescentes; stipes gracilis, firmus, fistulosus, subpruinosus, pallidus; sporae oblongae vel anguste ellipsoideae, 8–10 x 4–5 μ.

Melanopsamma confertissima (Plowr.) Sacc.

Dead branches of spice bush, Benzoin aestivale (L.) Nees. Lyndonville. C. E. Fairman.

Microcera coccophila Desm.

Parasitic on San José scale infesting living branches of apple trees. Hicksville, Nassau co. October. F. C. Stewart. A welcome enemy to a very unwelcome foe to fruit trees and shrubs.

Midotis irregularis (Schw.) Cke.

On decaying wood. Indian Lake, Hamilton co. October.

Monolepis nuttalliana (R. & S.) Wats.

Rochester. Miss F. Beckwith. September. An interesting member of the Goosefoot family. It has probably been recently introduced from the western part of the country.

Morchella crispa Karst.

Near Syracuse. May. F. B. Wheeler. It resembles Morchella conica Pers. but may be distinguished from it by the more irregular tortuous ribs of the cap, the chinks at the base of the stem and the longer spores.

Morchella rimosipes DC.

Near Syracuse. May. F. B. Wheeler. Probably both this and the preceding species of morel are edible, but as I have had no opportunity of making a personal test of their edible quality they are not here recorded as such.

Naias gracillima (A. Br.) Magn.

Water holes near West Albany. September. Formerly reported as a variety of Naias indica Willd. but now considered a distinct species.

Nardia crenulata (Sm.) Lindb.

Near Calamity pond, Essex co. August. Miss A. Lorenz.

Nardia hyalina (Lyell) Carr.

Banks of Marcy brook, Essex co. July. Miss A. Lorenz.

Panicum implicatum Scribn.

Albany; Machias, Cattaraugus co. and Adirondack mountains. July. Formerly confused with Panicum pubescens Lam. and P. lanuginosum Ell.

Panicum oricola H. & C.

Manor and Riverhead, Suffolk co. and Fulton Chain, Herkimer co. July and August. Formerly confused with Panicum dichotomum L. and P. atlanticum Nash.

Panicum spretum Schultes

Near Albany; Riverhead and Orient Point, Suffolk co. and Whitehall, Washington co. July. Formerly confused with Panicum dichotomum L.

Peridermium strobi Kleb.

Seedling white pines, Pinus strobus L. Lake Clear Junction, Franklin co. October. Perley Spaulding and C. R. Pettis. Our specimens are immature.

This parasitic fungus is destructive to white pine trees. It is dimorphic. Cronartium ribicola Dietr. is a form which develops on leaves of currant bushes. Its spores are capable of infecting white pine trees and reproducing the pine rust, Peridermium strobi, in them. To prevent this it is important that currant and gooseberry bushes whose leaves are attacked by the Cronartium should be destroyed at once.

Pezizella lanceolato-paraphysata Rehm

Dead stems of cultivated Spiraea filipendula L. Lyndonville. June. C. E. Fairman.

Phaeopezia fuscocarpa (E. & H.) Sacc.

Decaying wood. Kasoag, Oswego co. July.

Pholiota aurivella Batsch

Decaying wood of maple. Near Syracuse. October. F. B. Wheeler.

Phomopsis stewartii n. sp.

Perithecia gregarious, commonly occupying grayish or brown spots, thin, subcutaneous, at length erumpent, depressed, minute, ⅓–½ mm broad, black; spores of two kinds, first, filiform, curved, flexuous or uncinate, hyaline, 16–25 x 1–1.5 μ, second, oblong or subfusiform, hyaline, commonly binucleate, 8–12 x 2–3 μ; sporophores slender, equal to or shorter than the spores.

On stems of Cosmos bipinnatus Cav. Garden of Agricultural Experiment Station, Geneva, Ontario co. October. F. C. Stewart.

Perithecia gregaria, maculas griseas seu brunneas vulgo occupantia, tenua, subcutanea, deinde erumpentia, depressa, minuta, ⅓–½ mm lata, nigra; sporae dimorphae, primum, filiformes, cur-

vatae, flexuosae hamataeve, hyalinae, 16–25 x 1–1.5 μ, secundum, oblongae vel subfusiformes, hyalinae, vulgo binucleatae 8–12 x 2–3 μ, sporophores graciles, sporis aequales vel breviores.

Picris echinoides L.

Orient Point. September. R. Latham.

Potamogeton richardsoni (Benn.) Rydb.

Lake Champlain and Oneida lake. August. Formerly reported as a variety of Potamogeton perfoliatus L. but now classed as a distinct species.

Psilocybe nigrella n. sp.

PLATE III, FIG. 7–11

Pileus thin, broadly convex or nearly plane, slightly umbonate, hygrophanous, seal brown and shining when moist, even and obscurely striate on the margin, raw umber or mummy brown when the moisture has escaped; lamellae thin, rather close, rounded behind, adnexed, purple brown or seal brown, whitish on the edge; stem firm, rigid, equal, stuffed with a slender white pith, silky fibrillose, whitish; spores dark purplish brown, almost black, ellipsoid, 10–12 x 6–8 μ.

Pileus 2.5–4 cm broad; stem 3.5–7 cm long, 2–4 mm thick.

Damp mossy ground in swamps. Karner, Albany co. October.

Pileus tenuis, late convexus subplanusve, leviter umbonatus, hygrophanous, atrobrunneus, nitidus, levis, margineque obscure striatus in conditione uda, umbrinus in siccitate; lamellae tenues, subconfertae, adnexae, atrobrunneae, acie albidae; stipes firmus, rigidus, aequalis, medulla alba farctus, sericeo-fibrillosus, albidus; sporae purpureo-brunneae vel subatrae, ellipsoideae, 10–12 x 6–8 μ.

Puccinia epiphylla (L.) Wettst.

Living leaves of low spear grass, Poa annua L. Lyndonville. September. C. E. Fairman.

Ribes triste albinervium (Mx.) Fern.

Colton hill swamp. Fine. August.

This is closely related to Ribes vulgare Lam., the common garden currant, from which it may be separated by its more straggling, partly decumbent habit and by the glands on the pedicels.

The variety differs from the typical form in having the leaves glabrous on the lower surface.

Rubia tinctorum L.

Near Smiths Basin, Washington co. October. S. H. Burnham.

Introduced and formerly cultivated for its roots, which yield a coloring matter suitable for dyeing. It has persisted several years in the locality cited.

Rumex pallidus Bigel.

Orient Point. July. R. Latham.

Rubus andrewsianus Blanch.

Sandy soil. Islip, Suffolk co. Formerly considered a small form of Rubus villosus frondosus Bigel.

Rubus permixtus Blanch.

Light soil in pastures. North Elba, Essex co. July. Formerly referred to Rubus procumbens Muhl.

Rubus recurvans Blanch.

Pine Plains, Dutchess co. and Snyders Corners, Rensselaer co. July and August. Formerly considered a variety of Rubus villosus Ait. of the older botanies.

Septoria sedicola n. sp.

Spots orbicular, 4–8 mm broad, usually one or two on a leaf, at first definite, depressed and without discoloration of the surrounding leaf tissue, at length convex above, concave beneath, the surrounding part of the leaf becoming yellowish, thin and flaccid, finally the whole leaf dying; perithecia numerous, minute, amphigenous, black; spores filiform, straight, curved or flexuous, enucleate, 20–40 μ long, 1–1.5 μ thick.

Living leaves of live-for-ever, Sedum purpureum Tausch. (Sedum telephium L. Man. ed. 6.) Fine. August.

This fungus is closely allied to Septoria sedi West. from which I have separated it because of its amphigenous perithecia and its enucleate spores. The host plant is very tenacious of life and on that account a very undesirable weed though it spreads slowly. This parasite is injurious to it and tends to keep it in check and may therefore be considered a beneficial fungus.

Maculae orbiculares, 4–8 mm latae, vulgo in ullo folio una duove, primus definitae, depressae, in partibus folii circumdantibus, absque decoloratione, deinde convexae supra, concavae infra, foliis flavescentibus, tenuibus, flaccidis, moribundis; perithecia numerosa, minuta, amphigena, nigra; sporae filiformes, rectae, curvatae flexuosaeve, enucleatae, 20–40 x 1–1.5 μ.

Solidago aspera Ait.

Orient Point. September. R. Latham.

Sparganium americanum Nutt.

Lakes and ponds. Sand Lake, Rensselaer co. July. Formerly regarded as Sparganium simplex nuttallii Engelm.

Sparganium angustifolium Mx.

Lake Placid, Essex co. Formerly recorded as Sparganium simplex angustifolium (Mx.) Engelm.

Sparganium diversifolium Graebn.

Shushan. September. S. H. Burnham.

Stachys sieboldii Miq.

Along the railroad near Whitehall. September. S. H. Burnham.

This is sometimes designated as Stachys tuberifera Naud., a name suggested by its tuberous edible roots. It bears the common names knot root, Chinese artichoke and Japan artichoke.

Stephanoma strigosum Wallr.

In woods. Lyndonville. August. C. E. Fairman.

This fungus is parasitic on Lachnea hemispherica Wigg. In the generic and specific descriptions some of the characters of the host plant are confusingly incorporated as if they belonged to the parasite.

Sterigmatocystis ochracea (Wilh.) VanTigh.

On diseased gladiolus bulbs and other vegetable matter kept under a bell glass in the office of the State Entomologist. Albany. April and May. J. B. Bartlett.

Trametes merisma n. sp.

Pileus coriaceous, fibrous, tough, commonly deeply divided into several pileoli, uneven, tuberculose, colliculose or diminutively proliferous, subpubescent, white or whitish, flesh pure white, the margin obtuse, sterile beneath; pores minute, 2–3 in a millimeter, developing from the center toward the margin, white, the edge of the dissepiments at first obtuse; stem like base short or none; spores not seen.

Pileus 2.5–7 cm broad.

Decaying prostrate trunks of beech trees, Fagus grandifolia Ehrh. Fine. August.

This singular fungus sometimes develops from the lower surface of the trunk, in which case a tubercle first appears and the pendent pileus develops from it and is centrally attached to it by the apex. The context of the pileus is similar to that of species of Polystictus, but the character of the pores indicates a closer connection with Trametes.

Pileus coriaceous, fibrosus, lentus, vulgo in pileolos paucos profunde divisus, asper tuberculosus colliculosus vel leviter proliferus, subpubescens, albus albidusve, carne candida, margine obtuso, infra sterile; pori minuti, .3–.5 mm lati, a centro ad marginem patescentes, albi, dissepimentis obtusis, stipes brevis vel nullus.

Trichosporium variabile n. sp.

Widely effused, forming thin indefinite blackish patches; hyphae prostrate or suberect, simple or branched, continuous or rarely septate, 4–5 μ in diameter, brown by transmitted light or partly hyaline; spores varying from globose to oblong, colored, 6–10 μ in diameter or 8–12 x 6–8 μ.

On building paper kept in rolls under shelter. Lyndonville. September and November. C. E. Fairman.

The species is remarkable for the variability in the size and shape of the spores. They are intermingled, but the oblong spores are more numerous than the globose. It differs from Trichosporium chartaceum (Pers.) Sacc. in its much larger spores.

Late effusum, stratum tenue indeterminatum nigrescens formans; hyphae repentes suberectaeve, simplices ramosaeve, continuae vel leviter septatae, 4–5 μ crassae, fuscae seu partim hyalinae; sporae fuscae, globosae, 6–10 μ latae, vel oblongae, 8–12 x 6–8 μ.

Verticillium rexianum Sacc.

Parasitic on Arcyria cinerea (Bull.) Pers. Fine. August.

Volvaria volvacea (Bull.) Fr.

Pittsford. August. F. S. Boughton. This is a white form with the silky fibrils of the pileus paler than in the typical form.

Zizania palustris L.

Shores of Lake Champlain near Whitehall and Dresden. August and September. This grass was formerly confused with Zizania aquatica L. but is now separated as a distinct species, distinguished by its broader leaves.

REMARKS AND OBSERVATIONS

Cardamine bulbosa (Schreb.) B. S. P.

This name takes the place in the New Manual of Cardamine rhomboidea DC. in Gray's Manual, ed. 6. Fine flowering specimens of it were collected in May near Little's pond, Albany co.

Centaurea solstitialis L.

This recently introduced plant is apparently spreading, specimens having been received the past season from Highland, Ulster co., where it was collected by C. J. Elting, and from the southern part of Cayuga co., collected by A. D. Baker.

Cerastium viscosum L.

Orient Point. May. R. Latham. This is a rare species in our State.

Crataegus verecunda gonocarpa n. var.

Leaves thin, elliptic, oval or suborbicular, obtuse or acutish, rounded at the base, yellowish green, green with age, becoming glabrous except a few scattered hairs on the upper surface, not at all or only slightly broadly lobed above the middle, the margins often curved upward, petioles 4–10 mm long, slightly margined above, glabrous or with few hairs in the furrow, with few or no glands.

Flowers 5–10 in a cluster, 12–14 mm broad, on short mostly simple pedicels less than an inch long, calyx lobes linear, glabrous, subentire; stamens 1–7, anthers whitish; styles 2–3.

Fruit erect or nearly so, compressed or obtusely 3-angled, dark red when ripe, with numerous minute yellowish lenticels, 10–12 mm long, 7–12 mm broad, compressed fruits about 7 mm in the narrow diameter, 12 mm in the broad diameter, flesh greenish yellow, hard and dry, nutlets 2–3, 7–9 mm long.

Rocky hillside. Corning. May 29, September 17 and 21.

A shrub 2–3 m tall with numerous spreading branches armed with curved spines 2.5–4 cm long, commonly pointing toward the base. The leaves on vigorous shoots are larger than the others, nearly orbicular and more distinctly lobed. The characters which specially distinguish this from the typical plant are its more entire elliptic or suborbicular leaves, its shorter pedicels and its compressed or bluntly angular fruit.

A planta typica differt in foliis magis integris, ellipticis vel suborbicularibus, pedicellis brevioribus et fructibus compressis vel obtuse triquetris.

Epilobium densum Raf.

Waste places. Fine. August. The name here used takes the place of Epilobium lineare Muhl. used in *Gray's Manual*, ed. 6.

Erythronium albidum Nutt.

This plant formerly grew in the vicinity of Albany but it long ago disappeared from this region. A specimen of it has been contributed by Prof. J. C. Smock, which was collected many years ago and has "Albany" on the label. A specimen in Beck herbarium is labeled "Wet meadows, Albany."

Exoascus pruni Fckl.

This parasitic fungus, which causes the enlargement of the fruit known as "bladder plums," was very prevalent about Rossie, St Lawrence co., in June. Many trees of both the wild black plum, Prunus nigra Ait., and the wild red plum, Prunus americana Marsh., had scarcely a sound plum on them.

Galium erectum Huds.

This introduced species of bedstraw is abundant in pastures and along roadsides near Hudson. It spreads by subterranean rootstocks and threatens to be a pernicious weed.

Hedeoma hispida Pursh

Two stations are now known in the State for this rare plant, Little Falls and Shushan.

Ilex verticillata tenuifolia (Fern.) Wats.

Orient Point. July. R. Latham.

Lactuca scariola integrata G. & G.

In the *New Manual* this name designates the wild lettuce previously referred to Lactuca virosa. This lettuce has now become very common in and around many cities and villages in the State.

Laportea canadensis L.

There are two forms of this nettle. One is common in moist or wet places. It has a slender stem, thin leaves on long slender petioles and usually bears a terminal cluster of pistillate flowers only.

The other is rare, grows in dry soil or upland either in woods or open places, has a stouter stem, thicker leaves on shorter petioles and frequently bears staminate flowers in the axils of most of the leaves, either with or without a terminal cluster of pistillate flowers. This form was found by the roadside at Fine and in woods near Castorland, Lewis co.

Listera australis Lindl.

A single plant was found in a large swamp near Fine. August.

Marasmius oreades Fr.

A variety with the pileus white or whitish occurs in grassy ground at Rossie. September.

Omphalia rugosodisca levidisca n. var.

Decaying wood. Fine. August. This differs from the typical form only in having the center of the pileus even.

Pileus in centro levis.

Peridermium consimile A. & K.

Leaves of black spruce, Picea mariana (Mill.) B. S. P. Fine. August.

Polyporus giganteus (Pers.) Fr.

About old stumps in woods. Fine. August. This species forms large clusters of pilei which are at first whitish or pale grayish brown, but they become brown or blackish brown in age or in drying. The minute white pores when fresh assume a blackish color where bruised and sometimes become black in drying.

Prunus pumila L.

Pulaski, Oswego co. August. C. E. Jones. The plants growing in sandy soil northwest of Albany and formerly referred to Prunus pumila are now referred to Prunus cuneata

Raf., which species is characterized by its more erect mode of growth.

Pyrus coronaria L.

The leaves of the American crabapple are quite variable. In one form they are gradually narrowed toward the acute apex but broad at or near the base and often somewhat lobed; in the other they are more or less oblong or elliptic and barely acute at the apex.

Pyrus melanocarpa (Mx.) Willd.

Fruiting specimens of this species were collected at the same time from shrubs on opposite sides of a path in a swamp near Fine. The shrub on one side of the path had black fruit, on the other, dark red.

Solanum nigrum L.

Although the fruit of this plant is reputed poisonous, nevertheless in some places it is used in making pies. The plant is even cultivated for its fruit. A form bearing very large fine fruit was observed in a garden at Rossie and the proprietor assured me that he used the fruit for food. Cooking appears to destroy its deleterious qualities. The cultivated form is locally known as "garden huckleberry."

Solidago squarrosa ramosa n. var.

Corning. September. This differs from the ordinary form in developing a pyramidal panicle of flowers at the top of the stem. The branches are 2.5–10 cm long, gradually diminishing in length from the base to the top of the panicle. The ray flowers are 8–11, disk flowers 9–14. Leaves more narrow than in the common form.

Panicula pyramidata, ramis 2.5–10 cm longis, flores marginis 8–11, flores disci 9–14, folia angustiora.

Schwalbea americana L.

In the *New Manual* this plant is said to grow in wet sandy soil near the coast. In Beck's *Botany* it is credited to sandy plains near Albany. In Paine's *Catalogue of Oneida County Plants* it is reported as occurring near Center (Karner) station between Albany and Schenectady. A specimen has been contributed to the herbarium by Professor Smock that was credited to Albany and probably collected in or near the locality observed by the author

of Paine's *Catalogue*. In the Beck herbarium there are specimens credited to Albany.

Thalictrum confine Fern.

Rossie. June. Specimens collected near Port Henry and referred to Thalictrum purpurascens L. belong here.

Thalictrum revolutum DC.

This name is used in the *New Manual* to designate the plant formerly referred to Thalictrum purpurascens ceriferum Aust. and the glandular leaved form of Thalictrum purpurascens L.

Viola sororia Willd.

A white or whitish flowered form of this species was found near Rochester in May by Miss F. Beckwith and specimens were contributed by her to the herbarium.

EDIBLE FUNGI

Clitocybe multiceps Pk.

MANY CAP CLITOCYBE

PLATE 117, FIG. 7–9

Pileus fleshy, firm, convex, slightly moist in wet weather, whitish, grayish or yellowish gray, flesh white, taste mild; lamellae close, adnate or slightly decurrent, whitish; stems densely cespitose, equal or slightly thickened at the base, solid or stuffed, firm, slightly pruinose at the top, whitish; spores globose, .0002–.0003 of an inch in diameter (5–8 μ).

The many cap clitocybe is quite constantly tufted in its mode of growth. The tufts may be composed of two or three or many individuals. When there are many individuals in a tuft the caps are generally irregular because closely crowded against each other in their growth. The surface is smooth but sometimes slightly silky and brownish in the center. The color is whitish, grayish or yellowish gray, but the flesh is pure white. The gills are white, closely placed, with intervening short ones, the longest ones reaching the stem and broadly connecting with it or slightly decurrent on it. The stems are stout, nearly equal in diameter in every part,

smooth, solid, white or whitish. They are crowded or even attached to each other at the base.

They may appear at any time from June to October if the weather is sufficiently rainy. The taste, though not acrid, is sometimes slightly disagreeable in the raw state, and unless thoroughly cooked the disagreeable flavor may not be wholly dispelled in preparing the caps for the table. This has given rise to different opinions concerning its edibility. One correspondent declares that he considers it one of the best mushrooms. Another thinks it unfit to eat. My first trials of it were not satisfactory. More recent ones lead me to place it among our edible species though it is scarcely to be considered first-class.

Lactarius aquifluus Pk.

WATERY MILK LACTARIUS

PLATE 118, FIG. 1–6

Pileus fleshy, fragile, convex or nearly plane, at length centrally depressed, sometimes with a small umbo, glabrous or slightly and minutely tomentose, burnt sienna red when young and moist, paler grayish buff or subochraceous when dry, flesh colored nearly like the pileus, milk watery, taste mild or tardily acrid; lamellae thin, close, adnate or slightly decurrent, yellowish; stem equal or slightly tapering upward, glabrous or subpruinose, hollow, paler than the pileus; spores subglobose, .0003–.00035 of an inch in diameter (8–9 μ).

The watery milk lactarius grows in mossy swamps or wet places, rarely as a short stem variety, Lactarius aquifluus brevissimus Pk., in black muck soil in old roads in woods. The plants are generally gregarious but sometimes tufted. The cap is 2–4 inches broad, the stem 1–4 inches long and 4–8 lines thick. It is moist or subhygrophanous in wet weather and even in dry weather when growing in wet places.

The color of the cap is at first yellowish red, but this soon changes to a grayish or pale ochraceous color as the moisture escapes. The flesh is colored similar to the pileus. The milk is scant and watery in appearance. The taste is mild or slowly and slightly acrid. The odor in the fresh plant is weak but agreeable. It becomes stronger in the dried plant and persists a long time. It is not always entirely destroyed even in cooking. It resembles the odor of melilot and is similar to that of Lactarius glyciosmus Fr. and Lactarius camphoratus (Bull.) Fr. The

gills have a pale creamy yellow color and become prunosely dusted by the spores in the dried plant. They are at first broadly attached to the stem but in specimens having the pileus centrally depressed they become slightly decurrent. The stem is nearly or quite smooth, hollow and colored like, but a little paler than the cap. It is generally about equal to the diameter of the cap in length. In the upland form it is shorter.

The species is closely related to Lactarius helvus Fr. of Europe, which is said by Fries to occur in a degenerate form in swamps and to have a rimose cap and watery milk. If we admit that Fries was correct in considering his watery milk lactarius a degenerate form of his typical Lactarius helvus with white milk, it still remains doubtful if our plant is the same as his, as some have claimed. The reasons for considering it a distinct species are two. First, it is not always an inhabitant of swamps, and, second, I have never found it with the cap rimose. It may be added as a presumptive distinguishing feature that Fries makes no mention of the very noticeable and long persistent odor emitted by the drying and dried plants. The further fact that our plant has never yet been found with white milk, even in its upland growth, leads to the conclusion that it is certainly not a degenerate form but a species constant in its milk character, and in its decided and persistent odor and therefore worthy of specific distinction.

Entoloma grande Pk.

GRAND ENTOLOMA

PLATE 119, FIG. 1–5

Pileus fleshy, thin toward the margin, glabrous, convex becoming nearly plane, often broadly umbonate, sometimes rugosely wrinkled about the umbo, moist in wet weather, yellowish white or grayish brown, flesh white, odor and taste at first farinaceous, then sometimes leaving a disagreeable sensation in the mouth; lamellae broad, subdistant, slightly adnexed, whitish becoming pink; stem equal or nearly so, solid, slightly fibrous externally, mealy at the top, white; spores angular, .0003–.0004 of an inch in diameter (8–10 μ).

The grand entoloma is a large but rare mushroom. It has been found in a single locality near Albany twice in 13 years. It has been found once in the state of Vermont by Professor Burt. It is one of the few species of the genus Entoloma that have a farinaceous taste and odor. It grows in woods and occurs in August. It is

found single or in tufts. The cap is 2–6 inches broad, the stem 1.5–6 inches long and 3–12 lines thick. The cap is convex or somewhat bell shape, becoming nearly flat, whitish to grayish brown in color, its surface is smooth, and in large specimens it is sometimes umbonate and rugosely wrinkled about the umbo. Its flesh is white. The gills are at first whitish or grayish but as they mature they assume the pink color of the spores. They are rounded next the stem and but slightly attached to it. The stem is white or whitish, solid and often mealy at the top.

On account of the disagreeable sensation left in the mouth by tasting the uncooked cap it was thought that this mushroom would probably be found to be unwholesome. But actual experiment has shown that this character is destroyed by thorough cooking and that the mushroom is edible though less highly flavored than some others. Its scarcity makes it of but little importance.

Hebeloma album Pk.

WHITE HEBELOMA

PLATE 117, FIG. 1–6

Pileus fleshy, thin, firm, convex becoming nearly plane or concave by the upcurving of the margin, glabrous, slightly viscid, white or yellowish white, flesh white, taste mild; lamellae thin, narrow, close, adnexed, whitish when young, becoming brownish ferruginous; stem equal, firm, solid, glabrous, slightly mealy at the top, white; spores subelliptic, .0005–.0006 of an inch long, .00025–.0003 broad (12–16 x 6–8 μ).

The white hebeloma is not a common mushroom but it is an excellent one for the table. It is gregarious in its mode of growth and occurs among fallen leaves and mosses or on naked damp soil in woods, and may be found in September and October. The cap is 1–2 inches broad, the stem 1–3 inches long and 2–3 lines thick. Generally the whole plant is white when young but the gills assume a brownish cinnamon or brownish rust color when mature. The edge of the gills is slightly excavated near the stem, to which they are narrowly attached. The cap is sometimes tinged with yellow and the stem is adorned at the top with white particles or a floccose mealiness. In State Museum Report 54, plate G, figures 1–7, the gills and spores are incorrectly colored. A new figure has therefore been prepared.

Boletus viridarius Frost

GREEN LAWN BOLETUS

PLATE 120, FIG. 1–10

Pileus fleshy, convex, viscid when moist, glabrous, dingy whitish, pale ochraceous reddish yellow or pale orange, inclining to reddish brown, flesh whitish or yellowish, unchangeable; tubes from plane to convex, usually slightly depressed around the stem, their mouths small or medium size, subrotund, the dissepiments at first whitish, becoming yellowish or yellowish brown when mature; stem equal or slightly tapering upward, solid, white or yellowish and distinctly reticulated above the slight white annulus, pallid, reddish or brownish below, whitish or yellowish within; spores oblong-fusiform, .0003–.0005 of an inch long, .00016–.00024 broad (8–12 x 4–6 μ).

Pileus 1–5 inches broad; stem 1–2.5 inches long, 3–6 lines thick.

Grassy ground near pine trees. September and October. Poughkeepsie. Miss H. L. Palliser.

This species is related to Boletus flavus With. by the stem being reticulate above the annulus, but it is far more variable in the color of the pileus and stem, and it also differs in the character of the margin of the pileus, which is often incurved and appendiculate by the remains of the white veil. In none of the specimens seen do I find any green hues, nor is anything said of green or greenish colors in the original description of the species by Mr Frost. We can therefore only infer that the specific name was suggested by the green grassy places in which this Boletus grows.

Its edible qualities have been tested both by Miss Palliser and myself and are considered excellent. The pileus is generally soiled by fragments of dirt or other matter, by reason of which it is better to remove the separable viscid cuticle before cooking. The plants vary in size. Those appearing in September are larger than those appearing in October. The tubes when young are whitish or pale yellow and where wounded assume a pale brownish or fawn color; when older they become brownish yellow and wounds assume a darker brown hue. The veil is white and in the later specimens appears to be more fully developed and more persistent than in the earlier ones. Its fragments in the later ones often adhere to the margin of the cap.

NEW SPECIES OF EXTRALIMITAL FUNGI

Amanita morrisii

PLATE W, FIG. 1–4

Pileus fleshy, subcampanulate becoming broadly convex, viscid when moist, glabrous, even on the margin, with a separable pellicle, dark grayish brown or blackish brown, becoming a little paler with age and with the escape of moisture, flesh white; lamellae thin, close, narrow, rounded behind, slightly adnexed, white; stem equal or slightly tapering upward, slightly bulbous at the base, solid or stuffed, slightly floccose, sometimes grayish and striate at the top, usually white, annulus double, radiately striate above, whitish buff beneath, the slight volva soon breaking into fragments and disappearing or occasionally partly adhering to the lower part of the stem; spores subglobose or broadly ellipsoid, 8–10 x 6–8 μ.

Pileus 5–10 cm broad; stem 8–14 cm long, 12–20 mm thick.

In black vegetable mold among mosses. Natick swamp, Mass. September. G. E. Morris.

Pileus carnosus, subcampanulatus, deinde late convexus, viscidus, glaber, margine leve, pellicula separabile, griseo-brunneus seu atro-brunneus, in senectute vel quum siccus pallidior, carne alba; lamellae tenues, confertae, angustae, leviter adnexae, albae; stipes aequalis, vel sursum attenuatus, solidus farctusve, minute flocculosus, aliquando griseus et ad apicem striatus, vulgo albus, annulus crassus, mollis, supra radiate striatus et alba, infra luteolus, volva in fragmenta mox frangens et vanescens, seu stipitis parti inferori in fragmentis rare adhaerens; sporae subglobosae vel ellipsoideae, 8–10 x 6–8 μ.

Agaricus eludens

PLATE X, FIG. 6–13

Pileus thin, ovate, broadly conic or subcampanulate, sometimes becoming broadly expanded, brown when young, becoming whitish and covered with brown fibrillose squamules, the center smooth, brown, the young margin surpassing the lamellae, flesh white changing to reddish where wounded; lamellae thin, close, narrow, free, whitish becoming bright pink, then chocolate brown and finally black or blackish brown; stem firm, nearly equal or sometimes thickened at the base, often slightly bulbous, fibrous, silky, white, stuffed with a hollow tube, internally white, changing to blood red

where wounded, then to brown or black, annulus thick, persistent, white; spores subglobose or ellipsoid, 5–7 x 4–5 μ.

Pileus 2.5–10 cm broad; stem 2.5–7 cm long, 4–8 mm thick.

Cespitose or single, often in clusters of many individuals. On dumping ground near Trenton, N. J. September. E. B. Sterling.

The pileus closely resembles that of Agaricus placomyces Pk., but the mushroom differs in its commonly tufted mode of growth, the darker color of its mature pileus, the thicker and more persistent annulus, the distinct hollow tube of the stem and specially in the change of color of the wounded flesh and stem. It is also closely allied to Agaricus approximans Pk. from which it may be separated by its lamellae becoming pink before they assume the brown color of maturity. The discoverer pronounces it edible but says its flavor is less agreeable than that of Agaricus campester L.

Pileus tenuis, ovatus, late conicus seu subcampanulatus, aliquando late expansus, quum juvenis brunneus deinde albidus, squamulis brunneis fibrillosis tectus, centro glaber, brunneus, margine juvene lamellas excedente, carne alba, ubi vulnerata rufescente; lamellae tenues, confertae, angustae, liberae, albidae, mox incarnatae, deinde nigro-brunneae; stipes firmus, subaequalis, aliquando basi incrassatus saepe leviter bulbosus, fibrosus, sericeus, albus, tuba cava farctus, carne alba, ubi vulnerata sanguinea, deinde brunnea vel nigra, annulus crassus, persistens, albus; sporae subglobosae vel ellipsoideae, 5–7 x 4–5 μ.

Russula blackfordae

PLATE Z, FIG. 9–13

Pileus fleshy but thin, broadly convex or nearly plane, viscid when moist, striate on the margin, whitish or pale gray, brown in the center, flesh white, taste mild; lamellae thin, narrow, close, adnate, pale yellow or cream color; stem equal, glabrous, stuffed or hollow, white; spores pale yellow, globose, 8–9 μ broad.

Pileus about 2.5 cm broad; stem about 2.5 cm long, 4–6 mm thick.

Ellis, Mass. October. Mrs E. B. Blackford.

This species differs from Russula fallax (Schaeff.) Sacc. in the color of the pileus, the closer and yellowish lamellae, the mild taste and the color of the spores. The viscid pellicle of the pileus is separable. The species belongs to the section Fragiles, second subsection.

Pileus carnosulus, late convexus subplanusve, quum humidus, viscidus, margine striatus, albidus, pallido-griseusve, centro brunneus, carne alba, sapore miti; lamellae tenues, angustae, confertae, adnatae, flavidae vel cremeae; stipes aequalis, glaber, farctus vel cavus, albus; sporae globosae, flavae, 8–9 μ latae.

Russula serissima

Pileus fleshy, thin, fragile, convex becoming nearly plane or centrally depressed, viscid when moist, glabrous, with the margin even or sometimes obscurely striate when old, variable in color, pale olive-green or brownish purple, sometimes spotted in the center, occasionally pruinose, flesh white or whitish, taste mild or slightly and tardily acrid, odor in the dried or drying plant strong, unpleasant, persistent; lamellae thin, close, 4–8 mm broad, narrowed behind, adnexed sometimes seceding from the stem, cream color or buff, becoming dingy or smoky in drying; stem equal or tapering upward, solid but spongy within, white, both it and the flesh assuming a somewhat smoky hue in drying; spores subglobose, buff yellow, 10–12 x 8–10 μ.

Pileus 5–7 cm broad; stem 4–7 cm long, 8–20 mm thick.

Under fallen leaves in woods. Ellis, Mass. October. Mrs E. B. Blackford and G. E. Morris.

The pileus varies in color as does the pileus of Russula variata Banning and Russula squalida Pk. It is very close to the latter, from which it scarcely differs except in its viscid pileus, its late occurrence, its lamellae and flesh not changing color where wounded and specially in the color of the spore print.

Pileus carnosus, tenuis, fragilis, convexus, deinde subplanus vel centro depressus, quum humidus viscidus, glaber, margine levis aliquando in senectute leviter striatus, olivaceus vel brunneo-purpureus, aliquando centro maculatus, rare pruinosus, carne alba albidave, sapore miti vel leviter tardeque acri, odore ingrato, persistente; lamellae, tenues, confertae, 4–8 mm latae, adnexae, cremeae vel luteolae, deinde fumidae; stipes aequales vel sursum attenuatus, solidus, intra spongiosus, albus, deinde fumosus; sporae subglobosae, luteo-flavae, 10–12 x 8–10 μ.

Lactarius bryophilus

PLATE X, FIG. 1–5

Pileus thin, broadly convex or nearly plane, with an even margin, sometimes slightly umbonate, very viscid or glutinous, reddish

becoming subochraceous sometimes with one or two narrow orange zones near the margin, flesh white, taste mild, milk watery, scanty; lamellae unequal, close, adnate, whitish becoming ochraceous buff; stem soft, equal, glabrous, stuffed or hollow, colored like or a little paler than the pileus; spores subglobose, 6–8 μ in diameter.

Pileus 1–4 cm broad; stem 1.5–3.5 cm long, 4–8 mm thick.

Among mosses in swamps. Natick, Mass. September and October. G. E. Morris and S. Davis.

A very rare species hitherto known from no other locality, and only sparingly found in this one. It may be easily recognized by its small size, very viscid subochraceous pileus, mild taste and watery, unchangeable milk. In one or two cases very young specimens have appeared to have white milk, but in mature specimens the milk is constantly watery. This is doubtless its normal color.

Pileus tenuis, late convexus subplanusve, margine levis, subumbonatus, viscosus, rufus deinde subochraceus, aliquando juxta marginem zona angusta auratiaca ornatus, carne alba, sapore miti, lacte aquoso, parco; lamellae inaequales, confertae, adnatae, albidae, deinde flavo-ochraceae; stipes mollis, aequalis, glaber, farctus cavusve, colore pileo similis vel pallidior; sporae subglobosae, 6–8 μ latae.

Naucoria sphagnophila

Pileus thin, convex becoming nearly plane, minutely appressed tomentose and sometimes flocculose squamulose, hygrophanous, when young and moist tinged with flesh color, becoming buff white in drying, grayish ochraceous or rusty brown when mature; lamellae thin, narrow, subsinuate, close, unequal, uneven on the edge, yellowish becoming ferruginous; stem equal, flexuous, solid or at length hollow, yellowish with a slight floccose tomentum at the top, white tomentose at the base; spores ellipsoid, 8–9 x 4–5 μ.

Pileus 1.2–2.4 cm broad; stem 2.5–4.5 cm long, 2–3 mm thick.

Gregarious. In sphagnum in a swamp. Stow, Mass. July. S. Davis.

Pileus tenuis, convexus vel subplanus, minute tomentosulus, aliquando floccoso-squamulosus, hygrophanus, in juventate subincarnatus, in maturitate griseo-ochraceus vel ferrugineus; lamellae tenues, angustae, subsinuatae, confertae, inaequales, acie erosae, flavidae, deinde ferruginae; stipes aequalis, flexuosus, solidus, deinde fistulosus, luteolus, ad apicem minute floccoso-tomentosulus, basi albido-tomentosus; sporae ellipsoideae, 8–9 x 4–5 μ.

Cortinarius ferrugineo-griseus

PLATE Y, FIG. 1–4. PLATE Z, FIG. 1–3

Pileus convex or nearly plane, sometimes with the thin margin upcurved and then appearing centrally depressed, hygrophanous, brownish ferruginous when moist, gray or whitish gray when the moisture has escaped, flesh whitish; lamellae 4–6 lines broad, moderately close, adnexed, appearing free in the dried plant, pale cinnamon or clay color when young, brownish cinnamon when mature; stem equal, abruptly bulbous at the base, solid or stuffed, silky fibrillose, sometimes colored like but paler than the pileus, sometimes shining, variable in color, whitish below and violet tinted above or entirely violaceous, violaceous within; spores ellipsoid and commonly uninucleate, 10–12 x 7–8 μ.

Pileus 3.5–10 cm broad; stem 3.5–8.5 cm long, 6–20 mm thick. Under pine trees near Natick swamp, Mass. October. G. E. Morris.

The growing plant is often covered with pine needles. It belongs to subgenus Hydrocybe and is closely allied to Cortinarius saturninus Fr., from which it may be separated by its pileus fading to grayish white and by its solid stem often abruptly bulbous. It also differs in its habitat and in its larger spores.

Pileus convexus vel subplanus, aliquando centro depressus, margine recurvato, hygrophanus, quum humidus ferrugineo-brunneus, quum siccus albido-griseus griseusve, carne albida; lamellae subconfertae, adnexae, 8–12 mm latae, in juventute cinnamomeae vel argillaceae, in maturitate brunneo-cinnamomeae; stipes aequalis, basi abrupte bulbosus, sericeo-fibrillosus, nitidus, solidus, infra albidus, supra violaceus, vel omnino violaceus, aliquando in colore pileo similis sed pallidior, interne albidus vel violaceus; sporae ellipsoideae, vulgo uninucleatae, 10–12 x 7–8 μ.

Cortinarius acutoides

PLATE Z, FIG. 4–8

Pileus submembranous, conic or subcampanulate, acute or acutely umbonate, hygrophanous, at first pale chestnut color floccose and white margined by the fibrils of the veil, after the escape of the moisture whitish and silky fibrillose; lamellae narrow, ascending, adnexed, subdistant, yellowish cinnamon; stem solid or with a small hollow, white, becoming whitish like the pileus; spores ellipsoid, 8-10 x 6–7 μ.

Pileus 8–16 mm broad; stem 2.5–5 cm long, 2–3 mm thick.

Swamps. Ellis, Mass. October. Mrs E. B. Blackford.

Closely allied to Cortinarius acutus (Pers.) Fr., from which it differs in the darker color of the young moist pileus and whiter color of the mature dry pileus, the white color of the young stem, the adnexed lamellae, and specially by the larger spores and absence of striae from the moist pileus. This may be the plant mentioned in *Sylloge* as a variety of Cortinarius acutus (Pers.) Fr.

Pileus submembranaceus, conicus subcampanulatusve, acutus vel acute umbonatus, hygrophanus, primus pallido-castaneus, velo albo fioccosus, margine albido, quum siccus albescens, sericeo-fibrillosus; lamellae angustae, ascendentes, adnexae, subdistantes, flavido-cinnamomeae; stipes solidus seu leviter cavus, albus deinde pileo in colore similis; sporae ellipsoideae, 8–10 x 6–7 μ.

Clavaria lavendula

Tufts 2.5–4 cm high, densely and subdichotomously branched, the branches compressed, thin, lilac pink when moist, pruinose when dry, the ultimate ones often bidentate, axils rounded; spores minute 6–8 x 3–4 μ.

Chestnut grove. Stow, Mass. July. S. Davis.

This species is related to Clavaria amethystina Bull., but it differs in its flattened branches and smaller spores.

Caespites 2.5–4 cm alti, dense et subdichotome ramosissimi, rami tenues, numerosi, compressi, quum humidi lavenduli, sicci, pallidiores pruinosique, ramuli ultimi saepe bidentati; sporae ellipsoideae, 6–8 x 3–4 .

Clavaria pallescens

Clubs simple, loosely cespitose or gregarious, 2.5–4 cm tall, clavate, soft, fragile, obtuse, pale buff fading to whitish, sometimes minutely rugulose, stuffed or hollow, pale yellow within; stem short, glabrous, 2–4 mm long, pale yellow; spores oblong or elliptic, white, 9–12 x 6–8 μ.

Dry gravelly soil near Kalmia angustifolia L. South Acton, Mass. October. S. Davis and G. E. Morris.

This species is allied to Clavaria ligula Fr. from which it differs in its smaller size, in its color becoming whitish or paler with age or in drying, but being lemon-yellow and more persistent

within, in its glabrous lemon-yellow stem and in its broader spores. It is apparently a rare but very distinct species.

Clavae simplices, laxe caespitosae vel gregariae, 2.5–4 cm longae, clavatae, molles, fragiles, obtusae, luteolae, deinde albescentes, aliquando minute rugulosae, farctae cavaeve, intra flavae; stipes 2–4 mm longus, glaber, flavidus; sporae oblongae vel ellipsoideae, albae, 9–12 x 6–8 μ.

NEW YORK SPECIES OF INOCYBE

Inocybe Fr.

Veil universal, subfibrillose, concrete with the cuticle of the pileus, often free on the margin, webby; lamellae subsinuate (rarely adnate or decurrent) changing color, not cinnamon pulverulent; spores even, angular or rough, more or less brownish ferruginous. *Sylloge* 5:762

The species of this genus are generally of small or medium size. They were formerly included by Fries in the genus Hebeloma, from which the universal veil concrete with the commonly dry pileus specially distinguishes them. The prevailing color of the pileus is brown in some of its shades. In no other genus of the Agaricaceae is it more necessary to make use of the microscope in the identification of the species, for the external resemblance in some is so close that microscopic examination of the spores can not safely be omitted. The presence or absence of cystidia is also a character of some importance in the classification and identification of the species. Nearly all the species are terrestrial, some growing in woods, others in pastures and open places. A few occur on the ground and on decaying wood also. They have been distributed in five sections for convenience of study and the better understanding of their relations to each other. One author has instituted a genus depending on the rough spore character but it does not seem to find much favor among mycologists.

A microscopic examination of the spores would be necessary in such a case before even the generic identification could be made. Many of our species are rare or local, having been found but once and in a single locality.

In the following pages the arrangement of the sections as given in *Sylloge* has been followed. The following key to the sections is based on external characters and indicates the prominent characteristic of each section.

KEY TO THE SECTIONS

Pileus and stem both squamose.....Squarrosae
Pileus and stem not both squamose.....1
1 Cuticle of the pileus lacerated or cracked.....2
1 Cuticle of the pileus continuous.....3
2 Pileus squamose or fibrillosely lacerated.....Lacerae
2 Pileus radiately rimose and fibrillose.....Rimosae
3 Pileus not viscid.....Velutinae
3 Pileus viscid.....Viscidae

Squarrosae

Pileus at first squamose or squarrosely squamose; stem squamose, colored like the pileus, both commonly some shade of brown.

This section differs from the others in having the pileus and stem alike in color and both squamose or squamulose.

KEY TO THE SPECIES

Spores even.....1
Spores not even.....4
1 Pileus dark brown.....2
1 Pileus not dark brown.....3
2 Pileus 2.5-5 cm broad, scales persistent.....calamistrata
2 Pileus 1.5-2.5 cm broad, scales subdeciduous.....mutata
3 Pileus tawny, stem hollow, fibrillose squamulose.....fibrillosa
3 Pileus subochraceous, stem solid, squamulose.....unicolor
4 Pileus 2.5 cm broad.....stellatospora
4 Pileus less than 2.5 cm broad.....lanuginosa

Inocybe calamistrata Fr.

CURVED SCALE INOCYBE

Sylloge 5: 762

Pileus fleshy, thin, campanulate or convex, obtuse, squarrosely squamose, brown or dark brown, flesh whitish, reddish where wounded; lamellae close, adnexed, whitish becoming ferruginous, the edge thick, whitish; stem equal, tough, solid, squarrosely squamose, brown, bluish at the base; spores oblong or ellipsoid, even. 10–15 x 5–6 μ.

Pileus 1–3 cm broad; stem 3–7 cm long, 2–4 mm thick.

Damp places under trees or bushes. Albany, Essex and Warren counties. August and September.

This species is well marked by the recurved scales of the pileus and stem and the bluish tint at the base of the stem. The European plant is described as having a strong odor but this character is scarcely noticeable in the American plant.

Inocybe mutata (Pk.) Mass.

CHANGED INOCYBE

Ag. (Hebeloma) mutatus Pk. N.Y. State Mus. Rep't 24, p.69

Pileus thin, broadly conic or convex, obtuse or slightly and broadly umbonate, at first covered with erect or recurved scales which at length disappear except at the center, dark brown; lamellae broad, close, rounded at the stem, deeply sinuate, adnexed, ferruginous brown, crenulate on the edge; stem slender, equal, solid, floccosely scaly, often curved at the base, brown; spores ellipsoid, even, 9–11 x 5–6 .

Pileus 1.5–2.5 cm broad; stem 5–7 cm long, about 2 mm thick.

Damp ground in woods. Ulster co. July.

The species is closely related to Inocybe calamistrata Fr. from which it may be separated by its smaller size, scales disappearing from the margin, absence of bluish tints from the base of the stem and shorter spores. The changed appearance of the pileus caused by the vanishing scales of the margin is suggestive of the specific name.

Inocybe fibrillosa Pk.

FIBRILLOSE INOCYBE

N. Y. State Mus. Rep't 41, p.65

Pileus thin, convex or nearly plane, obtuse or subumbonate, densely fibrillose, tawny, generally a little darker in the center and there adorned with appressed fibrillose scales; lamellae close, adnate, yellowish or yellowish olivaceous becoming brownish cinnamon; stem equal, hollow, fibrillosely squamose, colored like or a little paler than the pileus; spores ellipsoid, even, 8–10 x 5–6 μ.

Pileus 2–3.5 cm broad; stem about 2.5 cm long, 2–4 mm thick.

Damp mossy banks in woods. Albany co. August. A rare species.

Inocybe unicolor Pk.

ONE COLORED INOCYBE

N. Y. State Mus. Rep't, 50, p.104

Pileus conic or very convex becoming broadly convex or nearly plane, tomentosely squamulose, pale ochraceous or grayish ochraceous, flesh white; lamellae broad, subdistant, subventricose, pale ochraceous becoming tawny brown; stem slender, firm, equal, flexu-

ous, solid, squamulose, colored like the pileus; spores ellipsoid, even, 8–12 x 5–6 μ.

Pileus 2–2.5 cm broad; stem 2.5–3 cm long, 2–4 mm thick.

Clay soil. Albany co. July. Rare.

This species approaches Inocybe subochracea (Pk.) Mass. in color, but it differs in having the stem squamulose and colored like the pileus and in its larger spores.

Inocybe stellatospora (Pk.) Mass.

STELLATE SPORE INOCYBE

Ag. (Hebeloma) stellatosporus Pk. N. Y. State Mus. Rep't 26, p.57

Pileus thin, convex or nearly plane, dry, covered with erect or curved scales, dark brown; lamellae close, adnate, pallid becoming brown or slightly rusty brown; stem equal, firm, solid, squamose, colored like the pileus; spores subglobose, nodulose, 7–8 μ in diameter, cystidia 70–80 x 14–20 μ.

Pileus about 2.5 cm broad; stem 4–5 cm long, about 2 mm thick.

In woods. Lewis co. September.

In size and color this species resembles Inocybe mutata (Pk.) Mass. but it is easily distinguished by its persistent scales on the pileus and by its nodulose spores.

Inocybe lanuginosa (Bull.) Karst.

WOOLLY INOCYBE

Ag. (Inocybe) nodulosporus Pk. N. Y. State Mus. Rep't 32, p.28

Pileus thin, hemispheric or convex, obtuse, floccosely squamose, cervine brown or umber color, the scales of the disk usually erect; lamellae close, broad, ventricose, rounded at the stem, pallid becoming ferruginous cinnamon, white and crenulate on the edge; stem slender, equal, solid, flexuous, tomentosely squamulose, colored like the pileus; spores globose or subellipsoid, nodulose, 6–8 μ in diameter or 8–10 x 8 μ, cystidia ellipsoid, 30–40 x 16–20 μ.

Pileus 1–2 cm broad; stem 2–2.5 cm long, 2 mm thick.

Decaying wood in woods. Saratoga co. August.

European authors do not all agree concerning the character of the spores of this species, describing them as even, angular and acutely warty. In our specimens, which were at first supposed to be distinct, they are as here described. In other characters the

agreement with the description of Inocybe lanuginosa (Bull.) Karst. as given in *Sylloge* is so close that it seems best to refer our plant to this species.

Lacerae

Cuticle of the pileus squamose or fibrillosely lacerated; stem paler than the pileus.

KEY TO THE SPECIES

Spores even....1
Spores angular or nodulose....2
1 Pileus brown, fibrillosely squamulose....infelix
1 Pileus ochraceous buff, rimosely squamose in the center....squamosodisca
2 Spores angular....maritimoides
2 Spores nodulose....3
3 Pileus brown or grayish brown....diminuta
3 Pileus tawny or ochraceous....subfulva

Inocybe infelix Pk.

UNFORTUNATE INOCYBE

Ag. (Inocybe) infelix Pk. N. Y. State Mus. Rep't 32, p.29

Pileus campanulate broadly convex or nearly plane, subumbonate, floccosely squamulose, grayish brown or umber, flesh whitish; lamellae close, adnexed, ventricose, broad, whitish becoming brownish ferruginous; stem equal, solid, silky fibrillose, pallid or whitish above, generally brownish toward the base, pruinose at the top; spores oblong, even, 10–15 x 5–6 μ, cystidia flask shape, 40–60 x 15–20 μ.

Pileus 1.5–2.5 cm broad; stem 2–5 cm long, 2–4 mm thick.

Naked sterile soil or among mosses. Albany, Saratoga, Essex and Hamilton counties. May to August.

Var. **brevipes** Pk. N. Y. State Mus. Bul. 2, p.13.

Pileus scarcely exceeding 1.5 cm broad, stem about 1.5 cm long.

This is a common and variable species, but it is easily recognized by its persistently squamulose brown pileus and its oblong even spores. In wet weather the cuticle of the pileus is often more lacerated than in dry weather. The umbo is sometimes wanting. The plants occur throughout the season when the weather conditions are favorable. It is gregarious in its mode of growth.

Inocybe squamosodisca Pk.

SCALY DISK INOCYBE

N. Y. State Mus. Bul. 75, p.18

Pileus fleshy, firm, convex, fibrillose on the margin, rimosely squamose in the center, ochraceous or ochraceous buff, flesh whitish or yellowish white; lamellae broad, moderately close, adnate, pale ochraceous becoming darker with age; stem equal, solid, fibrillose, colored like or a little paler than the pileus; spores ellipsoid, even, 8–10 x 5–6 μ.

Pileus 2.5–5 cm broad; stem about 2.5 cm long, 4–6 mm thick.

Gregarious. Under pine trees. Hamilton co. August. Rare.

The scales of the pileus are caused by the cracking of the cuticle.

Inocybe maritimoides Pk.

MARITIMOID INOCYBE

N. Y. State Mus. Rep't 38, p.87

Pileus subconic or convex, obtuse or slightly umbonate, densely squamulose in the center, fibrillose on the margin, dark brown; lamellae close, adnexed, ventricose, whitish becoming brownish ochraceous; stem equal, solid, fibrillose, colored like but paler than the pileus; spores irregular, angular, ovate or ellipsoid, 7–9 x 5–6 μ, cystidia 40–55 x 12–20 μ.

Pileus 1.5–2.5 cm broad; stem about 2.5 cm long, 4 mm thick.

Sandy soil in woods. Albany co. October. Rare.

It resembles Inocybe maritima Fr. but is separated from it by the pileus which is not hygrophanous and by the spores which are smaller and angular but not nodulose.

Inocybe diminuta Pk.

SMALL INOCYBE

N. Y. State Mus. Bul. 105, p.23

Pileus thin, hemispheric becoming convex or nearly plane, squamose with erect or squarrose hairy scales in the center, fibrillose on the margin, grayish brown; lamellae subdistant, broadly sinuate, adnexed, ventricose, whitish becoming rusty brown; stem short, firm, solid, silky fibrillose, whitish above, grayish brown and slightly squamulose toward the base; spores subglobose, nodulose, 8–10 x 6–8 μ, cystidia 40–50 x 12–20 μ.

Pileus 6–12 mm broad; stem 8–16 mm long, 2 mm thick.

Bare compact soil in roads in woods. Suffolk co. August. Rare.

It appears like a dwarf form of Inocybe infelix Pk. but it is very distinct in the character of the spores.

Inocybe subfulva Pk.

TAWNY INOCYBE

N. Y. State Mus. Rep't 41, p.66

Pileus broadly conic or subcampanulate, becoming convex or nearly plane, subumbonate, fibrillosely squamose, tawny ochraceous; lamellae broad, close, adnexed, ventricose, pallid becoming tawny cinnamon; stem equal, firm, solid, fibrous striate, obscurely pruinose, colored like but paler than the pileus; spores globose or ellipsoid, stellately nodulose, 8–10 μ in diameter or 10–12 x 7–8 μ, cystidia 40–80 x 10–15 μ.

Pileus 1.5–3 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Sandy soil in fields. Albany co. August.

This species is closely allied to Inocybe gaillardi Gill, from which it may be distinguished by its larger size, solid stem and variable spores. The scales of the center of the pileus are often erect but not squarrose.

Rimosae

Pileus radiately fibrillose, soon radiately rimose, sometimes adorned with appressed scales; stem fibrillose, white or whitish or slightly tinged with the color of the pileus.

The species of this section are easily recognized by the radiately cracking of the cuticle of the pileus and the pale color of the stem.

KEY TO THE SPECIES

* Spores even 1
Spores angular or slightly nodulose 7
Spores distinctly nodulose 8
1 Pileus umbonate 2
1 Pileus not umbonate 5
2 Cuticle peeling in scales or patches ..... excoriata
2 Cuticle not peeling 3
3 Pileus pale brown ..... pallidipes
3 Pileus yellowish brown ..... rimosa
3 Pileus some other color 4
4 Pileus fawn color ..... eutheles
4 Pileus grayish fawn or chestnut ..... eutheloides
5 Pileus yellowish brown ..... rimosa

5 Pileus gray or grayish.....6
6 Young lamellae whitish.....griseoscabrosa
6 Young lamellae pale violaceous.....violaceifolia
7 Pileus chestnut color.....castanea
7 Pileus brown or dark brown.....umboninota
7 Pileus brownish with a whitish center.....albodisca
8 Pileus tawny gray.....rigidipes
8 Pileus brownish.....asterospora

Inocybe excoriata Pk.

EXCORIATE INOCYBE

N. Y. State Mus. Bul. 75, p.16, pl.O, fig.14–19

Pileus fleshy, broadly conic becoming broadly convex, umbonate, fibrillose or fibrillosely squamulose, slightly silky or tomentose on the margin, grayish brown, the cuticle often cracking and peeling, flesh white; lamellae close, narrow, adnexed, with a decurrent tooth, white becoming brownish gray, whitish and crenulate on the edge; stem equal, solid, silky fibrillose, white or whitish; spores ellipsoid, even, 8–10 x 5–6 μ, cystidia flask shape, 50–60 x 12–20 μ.

Pileus 2.5–5 cm broad; stem 2.5–5 cm long, 4–6 mm thick.

Among fallen leaves in woods. Hamilton co. August.

The surface of the pileus cracks radiately and thereby indicates the section to which the species belongs. A slight whitish webby veil is present in the young plant.

Inocybe pallidipes E. & E.

PALE STEM INOCYBE

Jour. Myc. 5, p.24

Pileus conic or campanulate becoming expanded, umbonate, fibrillosely squamose, innately or subrimosely scaly on the disk, subrimose on the margin, brown or pale brown; lamellae subclose, rather broad, ascending, becoming ventricose, adnate with a decurrent tooth, pallid becoming clay color or watery cinnamon; stem solid, slightly narrowed and mealy above, loosely fibrillose below, subbulbous, white, white tomentose at the base; spores unequally ellipsoid, even, 7–10 x 5–6 μ, cystidia ventricosely fusoid or flask shape, 40–60 x 14–20 μ.

Pileus 2–3 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Decaying wood and vegetable mold. Warren co. July.

This species may be recognized by its umbonate pileus and persistently white stem. The umbo is sometimes more highly colored

than the rest of the pileus. From Inocybe eutheloides Pk. it may be distinguished by its lamellae and white stem.

Inocybe rimosa (Bull.) Fr.

CRACKED INOCYBE

Sylloge 5:775

Pileus fleshy, thin, broadly conic or campanulate becoming expanded, obtuse or umbonate, silky fibrous, radiately cracking on the surface, yellowish brown; lamellae subclose, adnexed or nearly free, whitish becoming tan color or subferruginous; stem equal, firm, solid, mealy at the top, nearly glabrous, subbulbous, whitish; spores ellipsoid, even, 10–12 x 5–6 μ, cystidia very rare, 60–65 x 15–18 μ.

Pileus 2.5–5 cm broad; stem 2–5 cm long, 4–6 mm thick.

Ground in woods and open places. Albany, Franklin and Ulster counties. August and September.

This is a very variable species but one which is generally recognizable by the radiately cracking of the surface of the pileus.

Var. **parva** Pk. Very small; the pileus rarely more than 2 cm broad, the cuticle obscurely cracking or sometimes continuous.

Var. **cuspidata** Pk. Pileus with a very prominent narrow subacute or cusplike umbo.

Inocybe eutheles (B. & Br.) Sacc.

MAMMILLATE INOCYBE

Sylloge 5:776

Pileus thin, campanulate becoming expanded, distinctly umbonate, silky, shining, subsquamulose, pale fawn color; lamellae rather narrow, adnate, pallid becoming subferruginous, whitish crenulate on the edge; stem slender, solid, equal, fibrous, pallid or whitish; spores ellipsoid, even, 10–15 x 6–8 μ, cystidia very rare, 60–65 x 15–20 μ.

Pileus 2.5–4 cm broad; stem 3–6 cm long, 2–3 mm thick.

Ground. Albany co.

This species has been found but once and is apparently very rare. The European plant is said to have a farinaceous odor and spores 7–10 μ long. In our plant the spores are longer and the odor was not noticed, but in other respects the agreement is fairly good.

Inocybe eutheloides Pk.

EUTHELOID INOCYBE

N. Y. State Mus. Rep't 32, p.29

Pileus thin, campanulate becoming expanded, distinctly umbonate, silky fibrillose, subrimose, varying from grayish cervine to chestnut color, sometimes squamulose on the disk; lamellae close, rather broad, ventricose, narrowed toward the stem, adnexed, whitish becoming brownish ferruginous, white and crenulate on the edge; stem equal, subflexuous, solid, fibrillose, pallid or whitish; spores unequally ellipsoid, uninucleate, even, 8–12 x 5–6 μ, cystidia ventricose, 45–55 x 12–16 μ.

Pileus 1.5–2.5 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Ground in woods. Onondaga co. September.

This differs from Inocybe eutheles (B. & Br.) Sacc. in its smaller size, darker color, adnexed lamellae, and slightly smaller spores.

Inocybe griseoscabrosa (Pk.) Mass.

GRAYISH INOCYBE

Ag. (Hebeloma) griseoscabrosus Pk. N. Y. State Mus. Rep't 26, p.57

Pileus hemispheric or convex, fibrillosely squamulose, cinereous, with margin whitish when young; lamellae broad, close, whitish becoming brownish ferruginous; stem firm, equal or slightly tapering downward, solid, fibrillose or slightly squamulose, whitish or grayish; spores ellipsoid, even, 9–12 x 5–8 μ, cystidia ventricose, 40–60 x 15–20 μ.

Pileus 1–2 cm broad; stem 3–5 cm long, 2–3 mm thick.

Ground in woods. Albany co. October. Rare.

This small species has been found but once. It is peculiar in having a grayish or cinereous pileus with a white margin.

Inocybe violaceifolia Pk.

VIOLACEOUS GILL INOCYBE

N. Y. State Mus. Rep't 26, p.57

Pileus thin, convex or nearly plane, floccosely fibrillose, subsquamulose, grayish buff; lamellae close, adnexed, pale violaceous becoming pale cinnamon; stem firm, solid, slender, fibrillose, white or whitish; spores ellipsoid, even, 8–10 x 5–6 μ, cystidia 40–60 x 15–20 μ.

Pileus 1–2 cm broad; stem about 2.5 cm long, 2mm thick.

Mossy ground in woods. Albany co. Rare.

This is a small pale species remarkable for the violaceous tint of the young lamellae. Sometimes the pileus is slightly umbonate. A webby veil is present in the young plant.

Inocybe castanea Pk.

CHESTNUT INOCYBE

N. Y. State Mus. Bul. 75, p.16, Pl.O, fig.1–8

Pileus conic or convex, umbonate, radiately rimose, fibrillose, chestnut color; lamellae thin, narrow, close, adnate, whitish becoming brownish ferruginous; stem equal, hollow, subglabrous, pruinose or mealy at the top, often with a whitish tomentum at the base, colored like but paler than the pileus; spores subglobose, angular or slightly nodulose, 6–8 μ in diameter or 8 x 6 μ, cystidia subfusiform, 50–80 x 12–18 μ.

Pileus 1–2 cm broad; stem 2.3–5 cm long, about 2 mm thick.

Mossy ground under spruce and balsam fir trees. Hamilton co. August. Rare.

This is a well marked species and not easily confused with any other.

Inocybe umboninota Pk.

UMBO MARKED INOCYBE

Ag. (Inocybe) umboninotus Pk. N. Y. State Mus. Rep't 38, p.87 in part

Pileus broadly campanulate becoming expanded, umbonate, fibrillose, slightly rimose, dark brown, the umbo sometimes darker than the rest of the pileus; lamellae close, adnate, sometimes slightly sinuate, whitish becoming brownish ferruginous; stem equal or slightly thickened at the base, solid, colored like but paler than the pileus, pruinose at the top; spores subglobose or ellipsoid, very slightly nodulose, 6–8 x 4–6 μ, cystidia 50–60 x 12–20 μ.

Pileus 1.5–2 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Ground in woods. Ulster co. September.

This species is closely related to Inocybe asterospora Quel. from which it may be separated by its less distinctly rimose pileus and by its smaller less globose and but slightly nodulose spores.

Inocybe albodisca Pk.

WHITE DISK INOCYBE

N. Y. State Mus. Rep't 51, p.290

Pileus conic or campanulate, umbonate, glabrous, whitish in the center when moist, elsewhere yellowish brown or lilac brown, paler when dry, slightly silky fibrillose, radiately rimose; lamellae subclose, adnexed, whitish becoming subferruginous; stem equal, solid, striate, slightly mealy or pruinose at the top, pallid; spores subglobose or ellipsoid, slightly nodulose, 6–8 μ in diameter or 8 x 6 μ, cystidia 40–60 x 14–20 μ.

Pileus 1.5–2.5 cm broad; stem 2–5 cm long, 3–4 mm thick.

Under spruce and balsam fir trees. Essex co. August.

The species is well marked by the whitish umbo or center of the pileus.

Inocybe rigidipes Pk.

RIGID STEM INOCYBE

N. Y. State Mus. Rep't 51, p.289

Pileus thin, convex or subcampanulate becoming convex, umbonate, squamulose, striate and slightly rimose on the margin when dry, tawny gray; lamellae broad, subdistant, narrowed toward the stem, slightly adnexed, tawny ochraceous; stem slender, flexuous, rigid, firm, solid, slightly pruinose, colored like the pileus; spores globose, strongly nodulose, 12 μ in diameter, cystidia 45–60 x 12–16 μ.

Pileus 1.5–2.5 cm broad; stem 3.5–6 cm long, about 2 mm thick.

Damp clay soil in shaded places. Albany co. August. Rare.

This species resembles Inocybe subfulva Pk. from which it may be distinguished by its globose spores and tawny gray pileus. It is also related to Inocybe calospora Quel. from which it differs in its tawny gray color, slightly adnexed lamellae, solid flexuous stem and larger spores.

Inocybe asterospora Quel.

STAR SPORE INOCYBE

Sylloge 5: 780

Pileus campanulate becoming expanded, umbonate, radiately rimose, fibrillose, brown or brownish, the umbo often darker than the rest; lamellae close, dull cinnamon; stem equal, subbulbous, sub-

glabrous, solid, whitish or tinged with the color of the pileus; spores subglobose, nodulose, 8–12 μ in diameter, cystidia 40–70 x 12–20 μ.

Pileus 2–3 cm broad; stem 3–6 cm long, 2–3 mm thick.

Ground in woods. Fulton and Rensselaer counties. June and July.

It bears some resemblance to Inocybe rimosa (Bull.) Fr. but from that species it is at once separated by its nodulose subglobose spores. A form with brown cap and prominent umbo was formerly confused with Inocybe umboninota Pk. from which it is also best separated by its spores.

Velutinae

Cuticle of the pileus not cracking, covered with interwoven fibrils, becoming smooth or appressedly squamose, disk even; stem polished, smooth, whitish, mealy at the top.

KEY TO THE SPECIES

Spores even 1
Spores slightly nodulose 5
Spores distinctly nodulose 7
1 Pileus white or whitish, rarely lilac tinted 2
1 Pileus some other color 3
2 Pileus 2–8 mm broad ..... comatella
2 Pileus 1–2.5 cm broad ..... geophylla
2 Pileus 2.5–7 cm broad ..... serotina
3 Pileus pale ochraceous ..... subochracea
3 Pileus pale tawny or brownish tawny 4
4 Pileus pale tawny, umbonate ..... agglutinata
4 Pileus brownish tawny, obtuse ..... subtomentosa
5 Pileus 2.5–5 cm broad ..... fallax
5 Pileus less than 2.5 cm broad 6
6 Pileus whitish or pallid 1–2 cm broad ..... paludinella
6 Pileus chestnut or subochraceous, 6–10 mm broad ..... subexilis
7 Pileus blackish brown with a grayish margin when moist, cinereous when dry ..... nigridisca
7 Pileus whitish, often with a reddish brown umbo ..... infida

Inocybe comatella Pk.

HAIRY CAP INOCYBE

N. Y. State Mus. Rep't 38, p.87, pl.2, fig.5–8

Pileus very thin, convex or expanded, clothed with whitish or grayish hairs, fimbriate on the margin; lamellae subdistant, adnexed, cinnamon; stem equal, solid, flexuous, pallid or reddish brown, slightly mealy at the top, slightly flocculose pruinose, with a

whitish mycelial tomentum at the base; spores subellipsoid, even, 8–10 x 5–6 μ, cystidia 45–55 x 12–20 μ

Pileus 4–8 mm broad; stem 1.5–2.5 cm long, about 1 mm thick.

Decaying wood and bark buried under fallen leaves. Fulton co. July. Rare. Found but once.

This is a very small but distinct species remarkable for the hairy covering of the pileus. The hairs on the margin are longer and coarser than the others. The habitat is unusual for an Inocybe.

Inocybe geophylla (Sow.) Fr.

EARTHY LEAF INOCYBE

Sylloge 5:784

Pileus fleshy but thin, conic or ovate becoming expanded, umbonate, silky fibrillose, even, commonly white or whitish, rarely lilac; lamellae close, rather broad, ventricose, adnexed, white becoming clay color; stem equal, firm, stuffed, white, mealy at the top, spores ellipsoid, 8–10 x 4–6 μ, cystidia 40–60 x 12–20 μ.

Pileus 1.5–2.5 cm broad; stem 2.5–6 cm long, 2–4 mm thick.

Ground in woods. Common. August to October.

A fine but small species found mostly in woods and varying some in the color of the pileus. Var. lilacinus Pk. with lilac colored pileus fading to whitish when old appears to include both Agaricus affinis Pers. and Agaricus geophilus Pers.

Inocybe serotina Pk.

LATE INOCYBE

N. Y. State Mus. Bul. 75, p.17

Pileus fleshy, firm, campanulate or convex becoming nearly plane, fibrillose on the margin, white or yellowish, flesh white; lamellae close, rounded at the stem, slightly adnexed, subventricose, whitish becoming brownish cinnamon; stem subequal, bulbous or sometimes narrowed at the base, solid, fibrous, white; spores oblong or ellipsoid, uninucleate, even, 12–16 x 6–8 μ.

Pileus 2.5–6 cm broad; stem 2.5–6 cm long, 6–12 mm thick.

Sandy soil of Lake Ontario. Wayne co. October. Rare or local. Found but once.

This is one of the largest of our species. Its late appearance in the season is suggestive of the specific name. It is reported by its discoverer, E. B. Burbank, to be edibile.

Inocybe subochracea (Pk.) Mass.

OCHRACEOUS INOCYBE

Ag. (Hebeloma) subochraceus Pk. N. Y. State Cab. Rep't 23, p.95

Pileus thin, conic or convex becoming expanded, commonly umbonate, fibrillosely squamulose, ochraceous yellow; lamellae close, sinuate next the stem, adnexed, whitish becoming ferruginous or brownish ferruginous; stem equal, solid, slightly fibrillose whitish; spores ellipsoid, even, 8–10 x 5–6 μ, cystidia 40–60 x 12–16 μ.

Pileus 2–4 cm broad; stem 1–6 cm long, 2–4 mm thick.

Ground in woods and open places. August to October. Common.

Var. **burtii** Pk. N. Y. State Mus. Rep't 54, p. 167, pl. H, fig. 23–29. Veil distinct, webby, adhering to the margin of the pileus and to the stem, stem long, 5–7.5 cm, fibrillose; mature lamellae darker colored.

Inocybe agglutinata Pk.

AGGLUTINATE INOCYBE

N. Y. State Mus. Rep't 41, p.67

Pileus conic or campanulate becoming convex, umbonate, appressedly fibrillose, sometimes streaked or spotted by the colored fibrils, pale tawny, the umbo very prominent, brown; lamellae close, broad, ventricose, adnexed, whitish becoming brownish cinnamon, usually whitish on the edge; stem firm, solid, pruinose at the top, white or whitish above, tawny or brown toward the base, fibrillose; spores subovate or ellipsoid, even, 10–12 x 5–6 μ, cystidia 40–60 x 16–24 μ.

Pileus 1–2.5 cm broad; stem 2.5–5 cm long, 2–4 mm thick.

Under pine trees. Ulster co. September. Rare.

The fibrils of the pileus appear as if glued to its surface but the pileus is not viscid. The species is very similar to Inocybe whitei B. & Br. in general appearance, but it differs from that species in having a very prominent umbo, in the absence of viscidity from the pileus and in its larger spores.

Inocybe subtomentosa Pk.

SUBTOMENTOSE INOCYBE

N. Y. State Mus. Rep't 48, p.11

Pileus thin, dry, convex or plane, minutely tomentose, brownish tawny; lamellae thin, close, adnate, slightly sinuate, brownish tawny;

stem short, solid, slightly silky fibrillose, colored like or a little paler than the pileus, often with a conspicuous white mycelioid tomentum at the base; spores subellipsoid, even, 8–10 x 5–7 μ.

Pileus 1.5–2.5 cm broad; stem 1.5–2.5 cm long, 2 mm thick.

Gravelly soil among fallen leaves. Clinton co. September. Rare.

This species is related to Inocybe tomentosa E. & E. from which it may be separated by the darker color of the pileus, the absence of an umbo and the larger spores. Its distinguishing features are its small size and minutely tomentose pileus of a uniform brownish tawny color.

Inocybe fallax Pk.

FALLACIOUS INOCYBE

N. Y. State Mus. Bul. 75, p.17, pl.O, fig.20–24

Pileus thin, campanulate or convex, umbonate, obscurely fibrillose, sometimes minutely and obscurely squamulose, whitish or whitish buff, subshining, the margin decurved and often splitting; lamellae thin, close, adnexed, pallid becoming brownish ferruginous; stem equal, flexuous, hollow, minutely mealy or pruinose, whitish; spores angular or slightly nodulose, 8–10 x 6–8 μ, cystidia 40–50 x 15–18 μ.

Pileus 2.5–5 cm broad; stem 5–7.5 cm long, 4–8 mm thick.

Among fallen leaves in woods. Hamilton co. August. Rare.

This species resembles large forms of Inocybe geophylla (Sow.) Fr. from which it may be separated by its spores.

Inocybe paludinella Pk.

MARSH INOCYBE

Ag. (Inocybe) paludinellus Pk. N. Y. State Mus. Rep't 31, p.34

Pileus thin, slightly convex, soon plane, umbonate, subfibrillose, whitish or pallid; lamellae narrow, close, adnate, whitish becoming subferruginous; stem slender, equal, colored like the pileus with a mass of white mycelium at the base; spores subangular, very slightly nodulose, 6–8 x 5–6 μ, cystidia 45–60 x 12–16 μ.

Pileus 1–2 cm broad; stem 2.5–5 cm long, 1–1.5 mm thick.

Gregarious. Low ground and wet places under bushes. Rensselaer co. August. Rare.

This species resembles small forms of Inocybe geophylla (Sow.) Fr. in color, but it is at once separated from that species by its slightly nodulose spores. From Inocybe trechispora

Berk. it differs in its smaller size, more slender stem, and in its pileus being neither viscid when moist nor silky when dry. Its lamellae are adnate and fairly bristle with numerous cystidia.

Inocybe subexilis Pk.

FEEBLE INOCYBE

Ag. (Inocybe) subexilis Pk. N. Y. State Mus. Rep't 38, p.87

Pileus thin, convex or subcampanulate becoming expanded, umbonate, fibrillose on the margin, pale chestnut becoming yellowish or subochraceous; lamellae narrow, close, adnexed, whitish becoming dingy ochraceous; stem equal, slender, flexuous, slightly striate, solid, minutely pruinose, pinkish becoming yellowish; spores subglobose, slightly nodulose, 5–6 μ in diameter, cystidia 45–60 x 12–15 μ.

Pileus 6–10 mm broad; stem 2–2.5 cm long, about 1 mm thick.

Damp mossy ground in woods. Fulton co. July. Rare.

Inocybe nigridisca Pk.

BLACK DISK INOCYBE

N. Y. State Mus. Rep't 41, p.67

Pileus thin, convex becoming nearly plane or centrally depressed, umbonate, minutely fibrillose and blackish brown with a grayish margin when moist, cinereous when dry; lamellae close, rounded at the stem, free or slightly adnexed, grayish becoming brownish ferruginous; stem slender, flexuous, firm, solid, minutely villose pruinose, reddish brown; spores globose or ellipsoid, nodulose, 5–6 μ in diameter or 7–8 x 5–6 μ, cystidia 45–50 x 12–15 μ

Pileus 8–16 mm broad; stem 2.5–4 cm long, about 1 mm thick.

Damp places under ferns. Oswego co. June. Rare.

Its distinguishing features are its blackish brown pileus with grayish margin when moist, fading to cinereous when dry.

Inocybe infida (Pk.) Mass.

UNTRUSTY INOCYBE

Ag. (Inocybe) infidus Pk. N. Y. State Mus. Rep't 27, p.95

Pileus firm, campanulate or expanded, subumbonate, slightly squamulose on the disk, often split on the margin, whitish with umbo or disk often reddish brown; lamellae close, narrow, adnexed, pallid, becoming subcinnamon; stem equal or a little enlarged at

the base, furfuraceous at the top, hollow, white; spores subglobose, nodulose, 8–10 x 6–8 μ, cystidia 40–60 x 12–20 μ.

Pileus 1.5–2.5 cm broad; stem 3–5 cm long, 2–4 mm thick.

Mossy ground in low woods. Essex co. September.

The resemblance of this species to some forms of Inocybe geophylla (Sow.) Fr. is so close that it is important to have a knowledge of its spore characters in order to make a satisfactory determination. The specific name is suggestive of this fact. Sometimes the margin is so abundantly and deeply split that the radiating lobes give a stellate appearance to the pileus. Inocybe commixta Bres., Inocybe umbratica Quel. and Inocybe leucocephala Boud. are given as synonyms of this species by Massee.

This species has been reported as having caused a slight temporary illness in some members of a family who had specimens of it prepared for the table and partook of them. It is well therefore to consider it a poisonous or at least an unwholesome species.

Viscidae

Pileus viscid becoming smooth.

This section connects the genus Inocybe with the genus Hebeloma, the viscid pileus being common to it and Hebeloma. The character, "becoming smooth," does not rigidly apply in all cases, for in some of the species the pileus is more or less persistently silky or fibrillose or hairy on the margin.

KEY TO THE SPECIES

Spores globose or subglobose.....tricholoma
Spores not globose.....1
1 Spores nodulose.....trechispora
1 Spores not nodulose.....2
2 Pileus blackish brown in the center.....fuscodisca
2 Pileus not blackish brown in the center.....vatricosoides

Inocybe tricholoma (A. & S.) Fr.

HAIRY MARGIN INOCYBE

Paxillus strigosus Pk. N. Y. State Mus. Rep't 26, p.63

Pileus thin, broadly convex becoming nearly plane or slightly depressed in the center, subviscid, slightly hairy, specially on the subciliate margin, whitish; lamellae close, narrow, decurrent, whitish becoming brownish or subferruginous; stem equal, stuffed or solid

pruinose, whitish; spores subglobose, even or minutely nodulose, 4–5 μ in diameter.

Pileus 2–3 cm broad; stem 4–5 cm long, 2–3 mm thick.

Ground among fallen leaves in woods. Lewis co. September.

This is a rare species which departs from the generic character in its decurrent lamellae. It is unlike any of our other species of Inocybe in its minute globose spores. These have been described in *Sylloge* as echinulate, but in our plant the spores appear even under ordinary magnification, most minutely uneven under higher power or better definition. By some, the species has been referred to the genus Flammula. It has also been taken as the type species of a genus Ripartites, instituted by Karsten to include all the species of this section.

Inocybe trechispora (Berk.) Karst.

ROUGH SPORE INOCYBE

Ag. (Hebeloma) trechisporus Berk. Outl. B. Fungi, p.156

Pileus thin, convex, acutely umbonate, at first viscid, then dry and silky, whitish with the umbo yellowish; lamellae subdistant, ventricose, sinuate, whitish becoming subferruginous; stem equal, slightly striate, stuffed, mealy, whitish; spores subglobose or ellipsoid, nodulose, 6–8 μ in diameter or 7–8 x 5–6 μ, cystidia 40–50 x 12–20 μ.

Pileus 2–3 cm broad; stem 2.5–5 cm long, 2–5 mm thick.

Ground in woods. Herkimer and Onondaga counties. August.

Inocybe fuscodisca (Pk.) Mass.

BROWN DISK INOCYBE

Ag. (Hebeloma) fuscodisca Pk. N. Y. State Mus. Rep't 27, p.95, pl.1, fig.3–6

Pileus conic becoming campanulate or expanded, umbonate, slightly viscid, fibrillose, whitish, blackish brown on the umbo; lamellae close, adnexed, whitish becoming brownish ferruginous, white crenulate on the edge; stem equal, solid, whitish pruinose at the top, fibrillose below, brownish; spores ellipsoid, even, 8–10 x 5–6 μ, cystidia 40–70 x 12–20 μ.

Pileus 1.5–2.5 cm broad; stem 2.5–7 cm long, 2–4 mm thick.

Ground under trees. Sullivan co. September. Rare.

The viscid pellicle is separable. The odor resembles that of chestnut blossoms.

Inocybe vatricosoides n. sp.

VATRICOSOID INOCYBE

Pileus thin, convex becoming nearly plane, slightly viscid when moist, obtuse or subumbonate, fibrillose on the margin from the abundant whitish webby veil, whitish, often reddish in the center, flesh whitish, odor like that of radishes; lamellae close, broadly sinuate, adnate with a decurrent tooth, whitish becoming brownish ferruginous, white crenulate on the edge; stem equal, flexuous usually curved at the base, stuffed or hollow, silky fibrillose, whitish or grayish, sometimes with whitish floccose scales toward the base; spores ellipsoid, even, 10–12 x 6–8 μ.

Pileus 2–3 cm broad; stem 2.5–5 cm long, 2–6 mm thick.

Damp ground under willows. Ulster co. September.

This species is closely allied to Inocybe vatricosa Fr. to which it was referred in New York State Museum Report 41, page 67, but from which it is here separated because of its well developed webby veil, its radishlike odor, its adnate lamellae, its silky fibrillose stem and its larger spores.

Pileus tenuis, convexus, deinde subplanus, dum humidus subviscidus, obtusus subumbonatusve, margine velo abundante albido arachnoideo fibrillosus, albidus saepe centro rufescens, carne albida, odore Raphani; lamellae confertae, late sinuatae, adnatae, albidae deinde fusco-ferrugineae, acie albae crenulatae; stipes aequalis, flexuosus, saepe basi curvatus, farctus fistulosusve, sericeo-fibrillosus, aliquando infra squamulis albis floccosis ornatus, albidus vel griseus; sporae ellipsoideae, leves, 10–12 x 6–8 μ.

Inocybe radiata Pk. N. Y. State Mus. Bul. 105, p. 24. The Port Jefferson specimens referred to this species as a small form are rather a small form of Inocybe asterospora Quel.

NEW YORK SPECIES OF HEBELOMA

Hebeloma Fr.

Veil partial, fibrillose or obsolete; stem fleshy fibrous, somewhat mealy at the apex; margin of the pileus at first incurved, the cuticle continuous, glabrous, subviscid; lamellae sinuate, adnexed, usually whitish on the edge; spores subargillaceous. *Sylloge* 5:791

This genus formerly included the species now referred to Inocybe. It differs from it specially in its partial veil and in its continuous, subviscid and glabrous cuticle. Some of the species have a peculiar radishlike odor. The spores in all our species are even. As in the

preceding genus, most of the species are terrestrial. They have been placed in two primary divisions, Exannulata and Subannulata. Our species fall in the Exannulata division which has been divided into three sections, the principal characters of which are indicated in the following key.

KEY TO THE SECTIONS

Pileus more than 3.5 cm broad.....1
Pileus less than 3.5 cm broad.....Pusilla
1 Veil present.....Indusiata
1 Veil absent.....Denudata

Indusiata

Veil evident, webby, often making the margin of the pileus superficially silky.

KEY TO THE SPECIES

Pileus glutinous and squamose.....glutinosum
Pileus viscid, not squamose.....1
1 Stem commonly showing fragments of an annulus.....velatum
1 Stem not at all annulate.....2
2 Pileus umbonate.....firmum
2 Pileus not umbonate.....3
3 Spores 6–8 long.....parvifructum
3 Spores 10–12 long.....4
4 Stem white, fibrous squamulose.....fastibile
4 Stem whitish or subochraceous, fibrillose.....pascuense

Hebeloma glutinosum (Lindgr.) Fr.

GLUTINOUS HEBELOMA

Sylloge 5:793

Pileus fleshy, convex becoming plane, glutinous, sprinkled with white superficial squamules, yellowish white, flesh white or whitish; lamellae close, sinuate, adnexed, yellowish becoming dingy cinnamon; stem equal or slightly thickened at the base, firm, stuffed, mealy at the top, fibrillose squamulose, whitish, somewhat ferruginous within; spores ellipsoid, 10–12 x 5–6 μ.

Pileus 2.5–7 cm broad; stem 4–8 cm long, 4–8 mm thick.

Ground in woods. Essex and Warren counties. September and October.

This species is easily recognized by its very viscose or glutinous pileus with its superficial white scales. These are not persistent and consequently specimens may be found without any scales.

Hebeloma velatum Pk.

VEILED HEBELOMA

Hebeloma colvini Pk., var. velatum Pk. N. Y. State Mus. Rep't 48, p.19

Pileus convex, plane or slightly centrally depressed, obtuse or umbonate, slightly viscid when moist, glabrous or slightly silky from the veil which may disappear with age or persist and make the margin silky or floccosely scaly or appendiculate with its fragments, chestnut color, reddish gray, pale ochraceous or grayish; lamellae close, ventricose, adnexed, whitish becoming pale cinnamon, whitish and often crenulate on the edge; stem equal, hollow, silky fibrillose, sometimes floccosely squamulose toward the base, often more or less annulate, the soft cottony whitish or grayish veil rupturing and adhering partly to the stem and partly to the margin of the pileus, whitish; spores subellipsoid, 10–12 x 6–8 μ.

Pileus 1.5–6 cm broad; stem 1.5–6 cm long, 4–6 mm thick.

Gregarious or cespitose. Gravelly soil under cottonwood trees. Clinton co. September.

This is an extremely variable species and shows how difficult it may be with a limited number of specimens in such cases to locate them correctly. All the forms here included under one name were collected at the same time and place, in a limited area but a few feet in diameter. They are without doubt all one species. Their general appearance suggested such a close relationship to Hebeloma colvini Pk. that it was thought best to group them all under that species as a variety distinguished chiefly by its more fully developed veil. If only the form having the veil and annulus in their most highly developed condition had been seen, the species might easily have been referred to the genus Pholiota. Even with those in which only fragmentary vestiges of the veil adhere to the stem its natural place would seem to be in the Subannulata division of the genus Hebeloma. But other forms show no trace of an annulus and compel us to be more conservative in our assignment of this perplexing species. It is therefore placed where the more abundant forms and less strongly developed or silky fibrillose veil would require it to go. It differs from Hebeloma strophosum Fr. in its great variability, differently colored pileus, radishlike odor and specially in the whitish color of the young lamellae.

Hebeloma firmum (Pers.) Fr.

FIRM HEBELOMA

Sylloge 5:793

Pileus fleshy, convex or campanulate becoming expanded, umbonate, viscid, fibrillose, brick red with paler margin; lamellae close, rounded behind, adnexed, tan color becoming subferruginous; stem equal or nearly so, solid or with a small cavity, floccosely squamulose, whitish sometimes becoming subferruginous toward the base; spores subellipsoid, 10–12 x 5–6 μ.

Pileus 5–7 cm broad; stem 4–6 cm long, 6–8 mm thick.

Mossy ground in low woods. Essex co. September.

Hebeloma parvifructum Pk.

SMALL FRUIT HEBELOMA

Ag. (Hebeloma) parvifructus Pk. N. Y. State Mus. Rep't 38, p.88

Pileus convex becoming expanded, slightly viscid, whitish, grayish brown or pale chestnut, often paler on the margin; lamellae moderately close, slightly sinuate, white becoming dingy ochraceous, at first hidden by the copious white webby filaments of the veil; stem equal, often flexuous, solid, silky fibrillose, pruinose and substriate at the top, whitish above, ferruginous or brownish toward the base; spores subochraceous, 6–7 x 4–5 μ.

Pileus 5–7 cm broad; stem 5–8 cm long, 6–8 mm thick.

Sandy soil in pine woods. Albany co. October.

The small spores are suggestive of the specific name.

Hebeloma fastibile Fr.

OCHERY HEBELOMA

Sylloge 5:792

Pileus convex or nearly plane, compact, often wavy, obtuse, viscid when young, whitish, yellowish or tan color, flesh white, odor similar to that of radishes, taste bitterish, veil webby, distinct; lamellae sinuate, adnexed, subdistant, whitish or pallid becoming cinnamon, whitish on the edge; stem equal, solid, fibrous, firm, sometimes slightly bulbous, white; spores ellipsoid, 10–12 x 5–6 μ.

Pileus 3–7 cm broad; stem 5–7 cm long, 5–10 mm thick.

Ground in woods. Albany and Ulster counties. October.

A small white form, perhaps var. alba Sacc., has been found in Albany county.

Hebeloma pascuense Pk.

PASTURE HEBELOMA

N. Y. State Mus. Rep't 53, p.844, pl.C, fig.21–27

Pileus thin, convex becoming nearly plane, viscid when moist, obscurely innately fibrillose, brownish clay color, often darker or rufescent in the center, the margin when young often whitened by the thin webby veil, flesh whitish, odor similar to that of radishes; lamellae close, adnexed, whitish becoming pale ochraceous; stem firm, equal, solid, fibrillose, slightly mealy at the top, whitish or pallid; spores pale ochraceous, subellipsoid, uninucleate 10 x 6 μ.

Pileus 2.5–5 cm broad; stem 2.5–5 cm long, 4–6 mm thick.

Gregarious or subcespitose. Stony pastures. Warren co. October.

Closely related to Hebeloma fastibile Fr. but a smaller species with a more slender stem, a different habit and habitat, differently colored pileus and more crowded lamellae. Sometimes a narrow brown zone or line encircles the pileus near the margin.

Denudata

Pileus glabrous, veil absent from the first.

The species are easily distinguished from those of the preceding section by the entire absence of a veil.

KEY TO THE SPECIES

Pileus white or whitish....1
Pileus some other color....3
1 Lamellae dingy flesh color....sarcophyllum
1 Lamellae white or whitish becoming dingy ferruginous....2
2 Pileus white or yellowish white....album
2 Pileus whitish or grayish white....albidulum
3 Plant having a radishlike odor....crustuliniforme
3 Plant not having a radishlike odor....4
4 Plant growing in sandy soil in open places....colvini
4 Plant growing in woods....longicaudum

Hebeloma sarcophyllum Pk.

PINK GILL HEBELOMA

Ag. (Hebeloma) sarcophyllus Pk. N. Y. State Cab. Rep't 23, p.96, pl.1, fig.7–11

Pileus fleshy, obtusely conic or convex, glabrous, white, flesh white, taste bitterish; lamellae subclose, adnexed, deeply sinuate, dingy flesh color; stem equal, firm, stuffed, mealy or minutely

squamulose at the top, white; spores dark ferruginous, subellipsoid, 8–10 x 5–6 μ.

Pileus 1.5–3 cm broad; stem 2.5–4 cm long, 2–4 mm thick.

Grassy ground. Rensselaer co. June. Rare.

A species well marked by the peculiar color of the lamellae which at first suggests a species of Agaricus.

Hebeloma album Pk.

WHITE HEBELOMA

N. Y. State Mus. Rep't 54, p.147, pl.G, fig.1–7

Pileus fleshy, firm, convex becoming nearly plane or concave by the margin curving upward, glabrous, subviscid, white or yellowish white, flesh white; lamellae thin, narrow, close, sinuate, adnexed, whitish becoming brownish ferruginous; stem equal, firm, rather long, solid or stuffed, slightly mealy at the top, white; spores subellipsoid, pointed at one or both ends, 12–16 x 6–8 μ.

Pileus 2.5–5 cm broad; stem 3.5–7 cm long, 4–6 mm thick.

Among fallen leaves in woods. Essex co. October.

Easily recognized by the white color of both pileus and stem. A new figure of this species is given in the present report on plate 117, figure 1–6.

Hebeloma albidulum Pk.

WHITISH HEBELOMA

N. Y. State Mus. Rep't 54, p.148

Pileus fleshy, firm, broadly convex or nearly plane, glabrous, slightly viscid when moist, dingy white or grayish white, flesh white; lamellae close, narrow, adnexed, whitish becoming brownish ferruginous, white and minutely denticulate on the edge; stem equal, firm, glabrous, slightly mealy or pruinose at the top, hollow, sometimes slightly bulbous, colored like the pileus; spores subellipsoid, obtuse, 10–12 x 6–8 μ.

Pileus 2.5–6 cm broad; stem 3–6 cm long, 4–6 mm thick.

Among fallen leaves in woods. Essex co. October.

This differs from Hebeloma album Pk. in its more dingy color, its hollow stem and its shorter and more obtuse spores.

Hebeloma crustuliniforme (Bull.) Fr.

CRUSTULINE HEBELOMA

Sylloge 5:799

Pileus fleshy, convex becoming plane, obtuse or with an obtuse umbo, even, glabrous, slightly viscid when young, whitish tan or brick red, odor like that of radishes; lamellae close, adnexed, narrow, thin, whitish becoming clay color or brownish ferruginous; stem equal, stuffed or hollow, subbulbous, white squamulose at the top, whitish; spores ellipsoid, unequal, 10–12 x 5–7 μ.

Pileus 4–6 cm broad; stem 4–5 cm long, 6–10 mm thick.

Ground in woods or open places. Cattaraugus and Ulster counties. September.

Hebeloma colvini Pk.

COLVIN HEBELOMA

Ag. (Hebeloma) colvini Pk. N. Y. State Mus. Rep't 28, p.49

Pileus fleshy, convex or nearly plane, sometimes gibbous or broadly umbonate, rarely centrally depressed, glabrous, grayish or alutaceous with an ochraceous tint; lamellae close, broad, sinuate, adnexed, whitish becoming brownish ochraceous; stem equal, flexuous, silky fibrillose, stuffed or hollow above, solid toward the base, whitish; spores subellipsoid, 10–12 x 5–6 μ.

Pileus 2.5–7.5 cm broad; stem 2.5–8 cm long, 2–6 mm thick.

Sandy soil in open places. Albany co. October.

The mycelium binds the sand into a globose mass which adheres to the base of the stem.

Hebeloma longicaudum (Pers.) Fr.

LONG STEM HEBELOMA

Sylloge 5:800

Pileus fleshy, convex becoming expanded, glabrous, viscid, whitish, argillaceous or tan color, sometimes brownish or yellowish red on the disk; lamellae close, sinuate near the stem, adnexed, whitish and serrulate on the edge, tan color becoming dingy cinnamon; stem unequal, rather long, fragile, partly hollow, mealy at the top, obsoletely fibrillose, white; spores oblong or ellipsoid, 10–12 x 6–8 μ.

Pileus 3.5–6 cm broad; stem 5–9 cm long, 5–8 mm thick.

Ground in woods. Catskill mountains. September.

A rare species in our State.

Pusilla

Pileus small, less than 3.5 cm broad.

Several species have been referred to this section that have not a viscid pileus, but in some it is moist.

KEY TO THE SPECIES

Pileus slightly viscid when moist....1
Pileus not viscid when moist....4
1 Pileus white or yellowish white....sociale
1 Pileus some other color....2
2 Pileus ochraceous yellow....gregarium
2 Pileus tawny brown or reddish brown....3
3 Stem 2.5 cm long, center of pileus not changing color....sordidulum
3 Stem longer, center of pileus changing color with age or in drying....discomorbidum
4 Pileus hygrophanous when moist....5
4 Pileus not hygrophanous when moist....7
5 Stem white....palustre
5 Stem not white....6
6 Pileus uniformly brown....illicitum
6 Pileus brown with a whitish or pallid margin....pallidomarginatum
7 Pileus broadly umbonate, stem solid....excedens
7 Pileus not umbonate, stem hollow....fragilius

Hebeloma sociale Pk.

SOCIAL HEBELOMA

N. Y. State Mus. Bul. 75, p.15

Pileus fleshy but thin, convex becoming plane or nearly so, glabrous, slightly viscid when moist, yellowish white, flesh yellowish white, taste nauseous; lamellae thin, close, adnexed, whitish, then yellowish, finally brownish ferruginous; stem short, fibrous, floccose fibrillose, hollow, white; spores brownish ferruginous, ellipsoid, 6–8 x 4–5 μ.

Pileus 2–3 cm broad; stem 2.5–3.5 cm long, 3–6 mm thick.

Gregarious or subcespitose. Among short grass in pastures. Albany co. October.

This is distinguished from our other white or whitish species by its peculiar habitat and its small spores.

Hebeloma gregarium Pk.

GREGARIOUS HEBELOMA

N. Y. State Mus. Rep't 49, p.18

Pileus thin, hemispheric or convex, obtuse or rarely with a small inconspicuous umbo, slightly viscid when moist, glabrous or slightly silky on the margin, pale ochraceous, sometimes with a reddish or tawny tint in the center, flesh whitish; lamellae thin, close, adnate, whitish becoming subcinnamon; stem slender, stuffed or hollow, fibrillose, whitish, slightly mealy or pruinose at the top; spores ellipsoid, 10–11 x 5–6 μ.

Pileus 2–3.5 cm broad; stem 3–5 cm long, 2–4 mm thick.

Sandy soil in heathy places. Albany co. October. Rare.

The pileus is sometimes split on the margin in such a way as to cause it to appear stellately lobed. A slight radishlike odor is perceptible when the pileus is cut or broken. The plants are gregarious.

Hebeloma sordidulum Pk.

SLIGHTLY SORDID HEBELOMA

Ag. (Hebeloma) sordidulus Pk. N. Y. State Mus. Rep't 38, p.88

Pileus thin, firm, viscid when moist, convex, brownish red or tawny brown, paler on the margin, flesh white, with a radishlike odor; lamellae broad, close, rounded behind, slightly adnexed, pallid becoming brownish ochraceous; stem short, equal, stuffed or hollow, slightly fibrillose, pruinose at the top, white; spores subellipsoid, 12–15 x 6–7 μ.

Pileus 2–4 cm broad; stem about 2.5 cm long, 3–4 mm thick.

Sandy soil in open bushy places. Albany co. October. Rare.

Hebeloma discomorbidum Pk.

DISK DISEASED HEBELOMA

Ag. (Naucoria) discomorbidus Pk. N. Y. State Mus. Rep't 26, p.58

Pileus thin, broadly convex or nearly plane, glabrous, slightly viscid, reddish brown or chestnut color becoming brown in the center with age or in drying; lamellae close, narrow, white or pallid becoming brownish ferruginous, white and crenulate on the edge; stem equal, stuffed or hollow, slightly mealy at the top, white; spores ellipsoid, uninucleate, 10 x 6 μ.

Pileus 2–4 cm broad; stem 4–6 cm long, 2–4 mm thick.

Ground in woods. Lewis and Columbia counties. September and October.

In the dried specimens the center of the pileus has a brown or discolored appearance as if beginning to decay. This is suggestive of the specific name.

Hebeloma palustre Pk.

MARSH HEBELOMA

N. Y. State Mus. Bul. 25, p.649

Pileus thin, broadly convex becoming nearly plane, sometimes wavy or irregular, glabrous, hygrophanous, grayish brown and slightly striatulate on the margin when moist, paler when dry, flesh whitish; lamellae close, thin, ventricose, adnexed, grayish white becoming brownish cinnamon; stem equal or tapering upward, hollow, silky, white; spores subellipsoid, uninucleate, 10–12 x 6–8 μ.

Pileus 2.5–3.5 cm broad; stem 5–7 cm long, 4–8 mm thick.

Mossy ground in swampy woods. Oswego co. October. Rare.

Hebeloma illicitum Pk.

UNLAWFUL HEBELOMA

Ag. (Hebeloma) illicitus Pk. N. Y. State Mus. Rep't 24, p.68, pl.4, fig.1–5

Pileus fleshy, firm, convex or expanded, obtuse, glabrous, hygrophanous, dark brown when moist, paler when dry; lamellae close, broad, ventricose, adnexed, pale brown; stem equal, firm, hollow, striate at the top, with a white mycelium at the base, colored like but paler than the pileus; spores subellipsoid, 8–10 x 4–5 μ.

Pileus 2.5–3.5 cm broad; stem 3.5–5 cm long, 4 mm thick.

Decaying wood and sticks in woods. Lewis and Washington counties. September. Rare.

Gregarious or cespitose. The specific name has reference to its habitat, which is unusual for species of this genus.

Hebeloma pallidomarginatum Pk.

PALE MARGIN HEBELOMA

Ag. (Hebeloma) pallidomarginatus Pk. N. Y. State Mus. Rep't 25, p.78

Pileus broadly convex, sometimes irregular, glabrous, hygrophanous, brown with a pale margin when moist, ochraceous and subatomaceous when dry; lamellae close, thin, adnexed, brownish ochraceous; stem commonly long and flexuous, equal or tapering upward, hollow, white floccose at the base, colored like but paler than the pileus; spores subellipsoid, 10 x 5 μ.

Pileus 1–2.5 cm broad; stem 2.5–7 cm long, 2 mm thick.

Gregarious in swamps and wet places. Rensselaer co. September. Rare.

Hebeloma excedens Pk.

THIN MARGIN HEBELOMA

Ag. (Hebeloma) excedens Pk. N. Y. State Mus. Rep't 24, p.68

Pileus thin, convex, obtuse or broadly umbonate, glabrous, pale alutaceous, the margin surpassing the lamellae, taste and odor like that of radishes; lamellae close, deeply sinuate, adnexed, moderately broad, minutely eroded on the edge, pallid becoming brownish ferruginous; stem equal, solid, silky fibrillose, colored like the pileus; spores subellipsoid, 10–12 x 6–7 μ.

Pileus 1.5–2.5 cm broad; stem 3–5 cm long, 2–4 mm thick.

Sandy soil under or near pine trees. Saratoga co. October. Very rare. Not found since 1870.

Easily known by its thin margin which extends beyond the lamellae.

Hebeloma fragilius Pk.

FRAGILE HEBELOMA

Ag. (Hebeloma) fragilior Pk. N. Y. State Mus. Rep't 27, p.95

Pileus thin, fragile, convex becoming plane or centrally depressed, sometimes irregular or wavy on the margin, minutely squamulose when young, soon glabrous, pale grayish ochraceous; lamellae subdistant, ventricose, adnexed, whitish and crenulate on the edge, subochraceous; stem slender, equal, hollow, minutely furfuraceous becoming glabrous, colored like the pileus; spores ellipsoid, 6 x 4 μ.

Pileus 6–12 mm broad; stem about 2.5 cm long, 1–2 mm thick.

Damp decaying leaves in wet places in swamps. Hamilton co. July. Rare.

This is a very small species and in habitat is unlike any other of our species. Sometimes the stem is expanded at the base in a thin disk closely applied to the matrix. It needs further investigation and may possibly be found to be a species of Naucoria.

Ag. (Hebeloma) lacerus Fr. N. Y. State Cab. Rep't 23, p. 95 is referable to Inocybe asterospora Quel.

Ag. (Hebeloma) flocculosus Berk. N. Y. State Cab. Rept 23, p. 96 is referable to Inocybe infelix Pk.

Ag. (Hebeloma) ascophorus Pk. N. Y. State Mus. Rep't 24, p. 68 is erroneously described and is referable to Flammula highlandensis Pk.

LIST OF EDIBLE, POISONOUS AND UNWHOLESOME MUSHROOMS HITHERTO FIGURED AND DESCRIBED BY C. H. PECK, STATE BOTANIST

Agaricus abruptus *Pk.*
N. Y. State Mus. Mem. 4, p.163–64, pl.59, fig.8–14. 1900. (Agaricus abruptibulbus *Pk.* N. Y. State Mus. Bul. 94, p.36. 1905)
Agaricus arvensis *Schaeff.*
N. Y. State Mus. Rep't 48, p.140–41, pl.8. 1896. Bot. ed.
Agaricus campester *L.*
N. Y. State Mus. Rep't 48, p.134–37, pl.6. 1896. Bot. ed.
Agaricus diminutivus *Pk.*
N. Y. State Mus. Rep't 54, p.184–85, pl.74, fig.1–8. 1901
Agaricus haemorrhoidarius *Schulz.*
N. Y. State Mus. Rep't 54, p.183–84, pl.75. 1901
Agaricus micromegethus *Pk.*
(Agaricus pusillus *Pk.* N. Y. State Mus. Rep't 54, p.152. 1901)
N. Y. State Mus. Bul. 116, p.44, pl.107, fig.1–6. 1907
Agaricus placomyces *Pk.*
N. Y. State Mus. Rep't 48, p.142–43, pl.9, fig.7–12. 1896. Bot. ed.
Agaricus rodmani *Pk.*
N. Y. State Mus. Rep't 48, p.137–38, pl.9, fig.1–6. 1896. Bot. ed.
Agaricus silvicola *Pk.*
N. Y. State Mus. Mem. 4, p.164–65, pl.59, fig.1–7. 1900
Agaricus subrufescens *Pk.*
N. Y. State Mus. Rep't 48, p.138–40, pl.7. 1896. Bot. ed.
Amanita caesarea *Scop.*
N. Y. State Mus. Rep't 48, p. 155–57, pl.15. 1896. Bot. ed.
Amanita rubescens *Fr.*
N. Y. State Mus. Rep't 48, p.157–59, pl.16. 1896. Bot. ed.
Amanitopsis strangulata *(Fr.) Roze*
N. Y. State Mus. Rep't 51, p.300–2, pl.50, fig.1–10. 1898
N. Y. State Mus. Mem. 4, p.134–35, pl.44, fig.1–10. 1900
Amanitopsis vaginata *Roze*
N. Y. State Mus. Rep't 48, p.159–60, pl.17. 1896. Bot. ed.
Armillaria mellea *Vahl*
N. Y. State Mus. Rep't 48, p.164–67, pl.20. 1896. Bot. ed.
Boletinus grisellus *Pk.*
N. Y. State Mus. Mem. 4, p.169, pl.52, fig.13–19. 1900
Boletinus pictus *Pk.*
N. Y. State Mus. Bul. 25, p.681–82, pl.61, fig.1–5. 1899
N. Y. State Mus. Mem. 4, p.169, pl.61, fig.1–5. 1900
Boletus affinis *Pk.*
N. Y. State Mus. Rep't 49, p.64, pl.48, fig.6–16. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.174–75, pl.66, fig.7–14. 1900
Boletus bicolor *Pk.*
N. Y. State Mus. Bul. 54, p.973–74, pl.81, fig.6–11. 1902

Boletus brevipes *Pk.*
N. Y. State Mus. Rep't 49, p.63–64, pl. 48, fig.1–5. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.174, pl.66, fig.1–6. 1900
Boletus castaneus *Bull.*
N. Y. State Mus. Rep't 48, p.201–2, pl.36, fig.1–7. 1895. Bot. ed.
Boletus chrysenteron albocarneus *Pk.*
N. Y. State Mus. Rep't 54, p.185–86, pl.76, fig.21–25. 1901
Boletus clintonianus *Pk.*
N. Y. State Mus. Bul. 25, p.682, pl.61, fig.6–10. 1899
N. Y. State Mus. Mem. 4, p.170–71, pl.63. 1900
Boletus edulis *Bull.*
N. Y. State Mus. Rep't 47, p.200–1, pl.36, fig.8–12. 1896. Bot. ed.
Boletus edulis clavipes *Pk.*
N. Y. State Mus. Rep't 51, p.309–10, pl.54. 1898
N. Y. State Mus. Mem. 4, p.173–74, pl.65. 1900
Boletus eximius *Pk.*
N. Y. State Mus. Bul. 54, p.976–77, pl.80, fig.6–12. 1902
Boletus frostii *Russell*
N. Y. State Mus. Bul. 116, p.44–45, pl.108. 1907
Boletus granulatus *L.*
N. Y. State Mus. Rep't 48, p.196–97, pl.34, fig.1–5. 1896. Bot. ed.
Boletus laricinus *Berk.*
N. Y. State Mus. Bul. 94, p.46–47, pl.89. 1905
Boletus luteus *L.*
N. Y. State Mus. Rep't 48, p.195–96, pl.33, fig.7–12. 1896. Bot. ed.
Boletus niveus *Fr.*
N. Y. State Mus. Bul. 122, p.140–41, pl.113. 1908
Boletus nobilis *Pk.*
N. Y. State Mus. Bul. 94, p.48, pl.91. 1905
Boletus ornatipes *Pk.*
N. Y. State Mus. Bul. 54, p.975–76, pl.80, fig.1–5. 1902
Boletus pallidus *Frost*
N. Y. State Mus. Bul. 54, p.974–75, pl.81, fig.1–5. 1902
Boletus rubropunctus *Pk.*
N. Y. State Mus. Bul. 94, p.47, pl.90. 1905
Boletus rugosiceps *Pk.*
N. Y. State Mus. Bul. 116, p.45. 1907
N. Y. State Mus. Bul. 94, p.20–21, pl.Q, fig.6–10. 1905
Boletus scaber *Fr.*
N. Y. State Mus. Rep't 48, p.199–200, pl.35. 1896. Bot. ed.
Boletus spectabilis *Pk.*
N. Y. State Mus. Mem. 4, p.171–72, pl.62. 1900
Boletus subaureus *Pk.*
N. Y. State Mus. Mem. 4, p.169–70, pl.61, fig.6–13. 1900
Boletus subglabripes *Pk.*
N. Y. State Mus. Rep't 51, p.308–9, pl.55. 1898
N. Y. State Mus. Mem. 4, p.172–73, pl.64. 1900
Boletus subluteus *Pk.*
N. Y. State Mus. Rep't 48, p.196, pl.33, fig.1–6. 1895. Bot. ed.

Boletus versipellis *Fr.*
N. Y. State Mus. Rep't 48, p.198, pl.34, fig.6–10. 1896. Bot. ed.
Bovista pila *B. & C.*
N. Y. State Mus. Bul. 75, p.34, pl.84, fig.14–18. 1904
Bovista plumbea *Pers.*
N. Y. State Mus. Bul. 54, p.977–78, pl.81, fig.12–19. 1902
Cantharellus cibarius *Fr.*
N. Y. State Mus. Rep't 48, p.190–91, pl.32. 1896. Bot. ed.
Cantharellus cinnabarinus *Schw.*
N. Y. State Mus. Bul. 25, p. 679–680, pl.60, fig.1–9. 1899
N. Y. State Mus. Mem. 4, p.155–56, pl.55, fig.1–8. 1900
Cantharellus dichotomus *Pk.*
N. Y. State Mus. Bul. 67, p.46–47, pl.84, fig.8–21. 1903
Cantharellus floccosus *Schw.*
N. Y. State Mus. Bul. 25, p.680–81, pl.60, fig.10–14. 1899
N. Y. State Mus. Mem. 4, p.156–57, pl.55, fig.9–13. 1900
Cantharellus infundibuliformis *(Scop.) Fr.*
N. Y. State Mus. Mem. 4, p.158–59, pl.56, fig.9–16. 1900
Cantharellus lutescens *Fr.*
N. Y. State Mus. Mem. 4, p.157–58, pl.56, fig.1–8. 1900
Cantharellus minor *Pk.*
N. Y. State Mus. Bul. 131, p.41–42, pl.116, fig.12–17. 1909
Clavaria botrytis *Pers.*
N. Y. State Mus. Rep't 48, p.211, pl.39, fig.5–7. 1896. Bot. ed.
Clavaria botrytoides *Pk.*
N. Y. State Mus. Bul. 94, p.49, pl.93, fig.5–7. 1905
Clavaria conjuncta *Pk.*
N. Y. State Mus. Bul. 105, p.42–43, pl.102. 1906
Clavaria cristata *Pers.*
N. Y. State Mus. Rep't 48, p.211–12, pl.39, fig.8–12. 1896. Bot. ed.
Clavaria flava *Schaeff.*
N. Y. State Mus. Rep't 48, p.210, pl.39, fig.1–4. 1896. Bot. ed.
Clavaria pistillaris *L.*
N. Y. State Mus. Bul. 94, p.50, pl.93, fig.1–4. 1905
Clavaria pistillaris umbonata *Pk.*
N. Y. State Mus. Mem. 4, p.178, pl.66, fig.15–17. 1900
Clitocybe adirondackensis *Pk.*
N. Y. State Mus. Rep't 54, p.174–75, pl.69, fig.1–13. 1901
Clitocybe amethystina *(Bolt.) Pk.*
N. Y. State Mus. Bul. 116, p.40–41, pl.106, fig.1–6. 1907
Clitocybe clavipes *(Pers.) Fr.*
N. Y. State Mus. Rep't 49, p.58, pl.45, fig.1–7. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.139–40, pl.46, fig.1–6. 1900
Clitocybe infundibuliformis *Schaeff.*
N. Y. State Mus. Rep't 48, p.174–75, pl.24, fig.1–6. 1896. Bot. ed.
Clitocybe laccata *Scop.*
N. Y. State Mus. Rep't 48, p.175–77, pl.25. 1896. Bot. ed.
Clitocybe maculosa *Pk.*
N. Y. State Mus. Rep't 54, p.174, pl.69, fig.14–21. 1901

Clitocybe media *Pk.*
N. Y. State Mus. Rep't 48, p.173–74, pl.23, fig.1–7. 1896. Bot. ed.
Clitocybe monadelpha *Morg.*
N. Y. State Mus. Rep't 51, p.302–3, pl.51, fig.1–5. 1898
N. Y. State Mus. Mem. 4, p.140–41, pl.46, fig.7–12. 1900
Clitocybe multiformis *Pk.*
N. Y. State Mus. Mem. 4, p.141, pl.47, fig.1–9. 1900
Clitocybe nebularis *Batsch*
N. Y. State Mus. Rep't 48, p.172–73, pl.23, fig.8–13. 1896. Bot. ed.
Clitocybe ochropurpurea *Berk.*
N. Y. State Mus. Bul. 116, p.41–42, pl.106, fig.7–11. 1907
Clitocybe subcyathiformis *Pk.*
N. Y. State Mus. Bul. 122, p.136–37, pl.110, fig.1–6. 1908
Clitopilus abortivus *B. & C.*
N. Y. State Mus. Bul. 54, p.968–69, pl.78, fig.13–19. 1902
Clitopilus micropus *Pk.*
N. Y. State Mus. Bul. 54, p.970, pl.78, fig.1–12. 1902
Clitopilus orcella *Bull.*
N. Y. State Mus. Rep't 48, p.153, pl.14, fig.7–11. 1896. Bot. ed.
Clitopilus prunulus *Scop.*
N. Y. State Mus. Rep't 48, p.152–53, pl.14, fig.1–6. 1896. Bot. ed.
Collybia acervata *Fr.*
N. Y. State Mus. Bul. 75, p.27–28, pl.84, fig.8–13. 1904
Collybia dryophila *(Bull.) Fr.*
N. Y. State Mus. Bul. 122, p.137–38, pl.111. 1908
Collybia familia *Pk.*
N. Y. State Mus. Bul. 75, p.28–29, pl.84, fig.1–7. 1904
Collybia platyphylla *Fr.*
N. Y. State Mus. Mem. 4, p.142–43, pl. 49. 1900
Collybia radicata *(Relh.) Fr.*
N. Y. State Mus. Rep't 51, p.304–5, pl.52. 1898
N. Y. State Mus. Mem. 4, p.143–44, pl.48. 1900
Collybia velutipes *(Curt.) Fr.*
N. Y. State Mus. Rep't 51, p.305–6, pl.50, fig.11–16. 1898
N. Y. State Mus. Mem. 4, p.144–45, pl.47, fig.10–15. 1900
Coprinus atramentarius *Fr.*
N. Y. State Mus. Rep't 48, p.144–45, pl.11, fig.7–11. 1896. Bot. ed.
Coprinus comatus *Fr.*
N. Y. State Mus. Rep't 48, p.143–44, pl.10. 1896. Bot. ed.
Coprinus micaceus *Fr.*
N. Y. State Mus. Rep't 48, p.145–47, pl.11, fig.1–6. 1896. Bot. ed.
Cortinarius cinnamomeus *Fr.*
N. Y. State Mus. Rep't 48, p.149–50, pl.13, fig.7–20. 1896. Bot. ed.
Cortinarius collinitus *Fr*
N. Y. State Mus. Rep't 48, p.149, pl.13, fig.1–6. 1896. Bot. ed.
Cortinarius corrugatus *Pk.*
N. Y. State Mus. Bul. 25, p.674, pl.57, fig.6–13. 1899
N. Y. State Mus. Mem. 4, p.161–62, pl.58, fig.8–15. 1900
Cortinarius evernius *Fr.*
N. Y. State Mus. Mem. 4, p.162–63, pl.58, fig.1–7. 1900

Cortinarius violaceus *Fr.*
N. Y. State Mus. Rep't 48, p.148–49, pl.12. 1896. Bot. ed.
Craterellus cantharellus *(Schw.) Fr.*
N. Y. State Mus. Rep't 49, pl. 44, fig. 1–5. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.177–78, pl.56, fig.17–21. 1900
Craterellus cornucopioides *Pers.*
N. Y. State Mus. Rep't 48, p.208–9, pl.24, fig.7–10. 1896. Bot. ed.
Crepidotus malachius *B. & C.*
N. Y. State Mus. Bul. 122, p.139, pl.112, fig.1–4. 1908
Fistulina hepatica *Fr.*
N. Y. State Mus. Rep't 48, p.204–5, pl.37, fig.5–9. 1896. Bot. ed.
Gyromitra esculenta *Fr.*
N. Y. State Mus. Rep't 48, p.128–29, pl.5, fig.1–3. 1896. Bot. ed.
Helvella crispa *Fr.*
N. Y. State Mus. Rep't 48, p.129–30, pl.5, fig.4–7. 1896. Bot. ed.
Hydnum albidum *Pk.*
N. Y. State Mus. Rep't 51, p.310, pl.56, fig.1–7. 1898
N. Y. State Mus. Mem. 4, p.175–76, pl.67, fig.1–7. 1909
Hydnum caput-ursi *Fr.*
N. Y. State Mus. Rep't 51, p.310–12, pl.56, fig.8–12. 1898
N. Y. State Mus. Mem. 4, p.176–77, pl.67, fig.8–12. 1900
Hydnum coralloides *Scop.*
N. Y. State Mus. Rep't 48, p.207–8, pl.24, fig.7–10. 1896. Bot. ed.
Hydnum repandum *L.*
N. Y. State Mus. Rep't 48, p.206–7, pl.38. 1896. Bot. ed.
Hygrophorus cantharellus *Schw.*
N. Y. State Mus. Rep't 54, p.175–76, pl.76, fig.8–20. 1901
Hygrophorus chlorophanus *Fr.*
N. Y. State Mus. Mem. 4, p.147, pl.51, fig.13–20. 1900
Hygrophorus flavodiscus *Frost*
N. Y. State Mus. Rep't 51, p.303–4, pl.51, fig.6–11. 1898
N. Y. State Mus. Mem. 4, p.145, pl.50, fig.1–6. 1900
Hygrophorus fuliginosus *Frost*
N. Y. State Mus. Rep't 49, p.59, pl.45, fig.8–14. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.146, pl.50, fig.7–12. 1900
Hygrophorus laricinus *Pk.*
N. Y. State Mus. Mem. 4, p.146–47, pl.51, fig.1–12. 1900
Hygrophorus laurae *Morg.*
N. Y. State Mus. Bul. 54, p.967–68, pl.77, fig.6–14. 1902
Hygrophorus laurae decipiens *Pk.*
N. Y. State Mus. Bul. 94, p.46, pl.88, fig.8–11. 1905
Hygrophorus miniatus *Fr.*
N. Y. State Mus. Rep't 48, p.182–84, pl.28, fig.1–10. 1896. Bot. ed.
Hygrophorus nitidus *B. & C.*
N. Y. State Mus. Bul. 94, p.45, pl.88, fig.1–7. 1905
Hygrophorus pratensis *Fr.*
N. Y. State Mus. Rep't 48, p.181–82, pl.28, fig.11–17. 1896. Bot. ed.
Hygrophorus pudorinus *Fr.*
N. Y. State Mus. Bul. 67, p.41–42, pl.83, fig.1–6. 1903

Hygrophorus puniceus *Fr.*
N. Y. State Mus. Bul. 25, p.675, pl.58, fig.1–7. 1899
N. Y. State Mus. Mem. 4, p.149, pl.52, fig.1–7. 1900
Hygrophorus speciosus *Pk.*
N. Y. State Mus. Mem. 4, p.148, pl.51, fig.21–28. 1900
Hygrophorus virgineus *(Wulf.) Fr.*
N. Y. State Mus. Bul. 25, p.675–76, pl.58, fig.8–12. 1899
N. Y. State Mus. Mem. 4, p.150, pl.52, fig.8–12. 1900
Hypholoma aggregatum sericeum *Pk.*
N. Y. State Mus. Bul. 54, p.972–73, pl.79, fig.8–14. 1902
Hypholoma incertum *Pk.*
N. Y. State Mus. Bul. 25, p.676–77, pl.58, fig.13–20. 1899
N. Y. State Mus. Mem. 4, p.165–66, pl.60, fig.1–9. 1900
Hypholoma perplexum *Pk.*
N. Y. State Mus. Rep't 49, p.61–62, pl.47, fig.11–18. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.166–67, pl.60, fig.10–17. 1900
Hypomyces lactifluorum *(Schw.) Tul.*
N. Y. State Mus. Bul. 105, p.43–44, pl.103. 1906
Lactarius chelidonium *Pk.*
N. Y. State Mus. Bul. 25, p.677–78, pl.59, fig.1–6. 1899
N. Y. State Mus. Mem. 4, p. 150–51, pl.53, fig.1–6. 1900
Lactarius deceptivus *Pk.*
N. Y. State Mus. Rep't 54, p.177–78, pl.70, fig.7–11. 1901
Lactarius deliciosus *Fr.*
N. Y. State Mus. Rep't 48, p.185–86, pl.29. 1896. Bot. ed.
Lactarius distans *Pk.*
N. Y. State Mus. Bul. 25, p.678–79, pl.59, fig.7–11. 1899
N. Y. State Mus. Mem. 4, p.151–52, pl.53, fig.7–11. 1900
Lactarius gerardii *Pk.*
N. Y. State Mus. Bul. 25, p.679, pl.59, fig.12–16. 1899
N. Y. State Mus. Mem. 4, p.152–53, pl.53, fig.12–16. 1900
Lactarius luteolus *Pk.*
N. Y. State Mus. Bul. 67, p.43, pl.83, fig.7–11. 1903
Lactarius rimosellus *Pk.*
N. Y. State Mus. Bul. 105, p.37, pl.95, fig.1–6. 1906
Lactarius serifluus *(DC.) Fr.*
N. Y. State Mus. Bul. 105, p.37–38, pl.95, fig.7–11. 1906
Lactarius subdulcis *(Bull.) Fr.*
N. Y. State Mus. Bul. 67, p.43–45, pl.83, fig.12–24. 1903
Lactarius subpurpureus *Pk.*
N. Y. State Mus. Rep't 54, p.176–77, pl.70, fig.1–6. 1901
Lactarius volemus *Fr.*
N. Y. State Mus. Rep't 48, p.186–88, pl.30. 1896. Bot. ed.
Lepiota americana *Pk.*
N. Y. State Mus. Rep't 49, p.56–57, pl.44, fig.6–10. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.136–37, pl.44, fig.11–16. 1900
Lepiota cepaestipes *Sow.*
N. Y. State Mus. Bul. 94, p.44–45, pl.87. 1905
Lepiota clypeolaria *(Bull.) Fr.*
N. Y. State Mus. Rep't 54, p.173, pl.76, fig.1–7. 1901

Lepiota naucinoides *Pk.*
N. Y. State Mus. Rep't 48, p.162–64, pl.19. 1896. Bot. ed.
Lepiota procera *Scop.*
N. Y. State Mus. Rep't 48, p.161–62, pl.18. 1896. Bot. ed.
Lycoperdon cyathiforme *Bosc*
N. Y. State Mus. Rep't 48, p.121–22, pl.2. 1896. Bot. ed.
Lycoperdon gemmatum *Batsch*
N. Y. State Mus. Bul. 122, p.135–36, pl.114, fig.7–15. 1908
Lycoperdon giganteum *Batsch*
N. Y. State Mus. Rep't 48, p.121, pl.1. 1896. Bot. ed.
Lycoperdon subincarnatum *Pk.*
N. Y. State Mus. Bul. 122, p.135, pl.114, fig.1–6. 1908
Marasmius oreades *Fr.*
N. Y. State Mus. Rep't 48, p.195–96, pl.33, fig.7–12. 1896. Bot. ed.
Mitrula vitellina irregularis *Pk.*
N. Y. State Mus. Rep't 48, p.130–31, pl.5, fig.8–14. 1896. Bot. ed.
Morchella angusticeps *Pk.*
N. Y. State Mus. Rep't 48, p.125, pl.4, fig.5–9. 1896. Bot. ed.
Morchella bispora *Sor.*
N. Y. State Mus. Rep't 48, p.126–27, pl.3, fig.8–10. 1896. Bot. ed.
Morchella conica *Pers.*
N. Y. State Mus. Rep't 48, p.124–25, pl.4, fig.1–4. 1896. Bot. ed.
Morchella deliciosa *Fr.*
N. Y. State Mus. Rep't 48, p.125–26, pl.3, fig.4–7. 1896. Bot. ed.
Morchella esculenta *Pers.*
N. Y. State Mus. Rep't 48, p.124, pl.3, fig.1–3. 1896. Bot. ed.
Morchella semilibera *DC.*
N. Y. State Mus. Rep't 48, p.126, pl.3, fig.11–13. 1896. Bot. ed.
Paxillus involutus *Fr.*
N. Y. State Mus. Rep't 48, p.150–51, pl.28, fig.18–23. 1896. Bot. ed.
Pholiota adiposa *Fr.*
N. Y. State Mus. Rep't 49, p.60–61, pl.46, fig.18–23. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.160–61, pl.57, fig. 12–17. 1900
Pholiota caperata *Pers.*
N. Y. State Mus. Rep't 54, p.182, pl.73, fig.1–5. 1901
Pholiota duroides *Pk.*
N. Y. State Mus. Bul. 131, p.39–40, pl.116, fig.1–7. 1909
Pholiota praecox (*Pers.*) *Fr.*
N. Y. State Mus. Rep't 49, p.59–60, pl.46, fig.1–17. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.159–60, pl.57, fig.1–11. 1900
Pholiota squarrosa *Muell.*
N. Y. State Mus. Bul. 54, p.971–72, pl.79, fig.1–7. 1902
Pholiota squarrosoides *Pk.*
N. Y. State Mus. Rep't 54, p.183, pl.73, fig.6–15. 1901
Pholiota vermiflua *Pk.*
N. Y. State Mus. Bul. 75, p.32, pl.86, fig.12–20. 1904
Phylloporus rhodoxanthus (*Schw.*) *Bres.*
N. Y. State Mus. Bul. 131, p.40–41, pl.116, fig.8–11. 1909
Pleurotus ostreatus *Fr.*
N. Y. State Mus. Rep't 48, p.180–81, pl.26, fig.5–9. 1896. Bot. ed.

Pleurotus sapidus *Kalchb.*
N. Y. State Mus. Rep't 48, p.179–80, pl.27. 1896. Bot. ed.
Pleurotus ulmarius *Bull.*
N. Y. State Mus. Rep't 48, p.177–79, pl.26, fig.1–4. 1896. Bot. ed.
Pluteus cervinus (*Schaeff.*) *Fr.*
N. Y. State Mus. Rep't 54, p.181–82, pl.74, fig.9–19. 1901
Polyporus sulphureus *Fr.*
N. Y. State Mus. Rep't 48, p.203–4, pl.37, fig.1–4. 1896. Bot. ed.
Psilocybe foenisecii (*Pers.*) *Fr.*
N. Y. State Mus. Bul. 75, p.33–34, pl.86, fig.1–11. 1904
Russula abietina *Pk.*
N. Y. State Mus. Rep't 54, p.180–81, pl.72, fig.1–11. 1901
Russula albida *Pk.*
N. Y. State Mus. Bul. 105, p.38, pl.96. 1906
Russula brevipes *Pk.*
N. Y. State Mus. Rep't 54, p.178–79, pl.71, fig.1–5. 1901
Russula compacta *Frost*
N. Y. State Mus. Bul. 116, p.42, pl.109. 1907
Russula crustosa *Pk.*
N. Y. State Mus. Bul. 67, p.45–46, pl.84, fig.1–7. 1903
Russula earlei *Pk.*
N. Y. State Mus. Bul. 116, p.42. 1907
N. Y. State Mus. Bul. 67, p.24, pl.N, fig.5–10. 1903
Russula flavida *Frost*
N. Y. State Mus. Bul. 105, p.38–39, pl.97. 1906
Russula furcata (*Pers.*) *Fr.*
N. Y. State Mus. Bul. 75, p.31–32, pl.85, fig.9–14. 1904
Russula mariae *Pk.*
N. Y. State Mus. Bul. 75, p.29–31, pl.85, fig.1–8. 1904
Russula nigricans (*Bull.*) *Fr.*
N. Y. State Mus. Rep't 54, p.178, pl.71, fig.6–9. 1901
Russula ochrophylla *Pk.*
N. Y. State Mus. Rep't 51, p.307–8, pl.53, fig.8–14. 1898
N. Y. State Mus. Mem. 4, p.154–55, pl.54, fig.8–14. 1900
Russula pectinatoides *Pk.*
N. Y. State Mus. Bul. 116, p.43, pl.105, fig.6–10. 1907
Russula pusilla *Pk.*
N. Y. State Mus. Bul. 122, p.138, pl.110, fig.7–14. 1908
Russula roseipes (*Secr.*) *Bres.*
N. Y. State Mus. Rep't 51, p.306–7, pl.53, fig.1–7. 1898
N. Y. State Mus. Mem. 4, p.153–54, pl. 54, fig.1–7. 1900
Russula rugulosa *Pk.*
N. Y. State Mus. Rep't 54, p.179–80, pl.72, fig. 12–18. 1901
Russula sordida *Pk.*
N. Y. State Mus. Bul. 105, p.39–40, pl.98. 1906
Russula subsordida *Pk.*
N. Y. State Mus. Bul. 105, p.40–41, pl.99. 1906
Russula uncialis *Pk.*
N. Y. State Mus. Bul. 116, p.43, pl.107, fig.7–12. 1907

Russula variata *Banning*
N. Y. State Mus. Bul. 105, p.41–42, pl.101. 1906
Russula virescens *Fr.*
N. Y. State Mus. Rep't 48, p.189–90, pl.31. 1896. Bot. ed.
Russula viridella *Pk.*
N. Y. State Mus. Bul. 105, p.41, pl.100. 1906
Strobilomyces strobilaceus (*Scop.*) *Berk.*
N. Y. State Mus. Bul. 94, p.48–49, pl.92. 1905
Stropharia bilamellata *Pk.*
N. Y. State Mus. Bul. 122, p.139–40, pl.112, fig.5–10. 1908
Tricholoma hirtellum *Pk.*
N. Y. State Mus. Bul. 116, p.38–39, pl.105, fig.1–5. 1907
Tricholoma imbricatum *Fr.*
N. Y. State Mus. Rep't 48, p.169–70, pl.21, fig.6–11. 1896. Bot. ed.
Tricholoma nudum (*Bull.*) *Fr.*
N. Y. State Mus. Bull. 116, p.39–40, pl.104. 1907
Tricholoma personatum *Fr.*
N. Y. State Mus. Rep't 48, p.170–72, pl.22. 1896. Bot. ed.
Tricholoma portentosum centrale *Pk.*
N. Y. State Mus. Bul. 25, p.673, pl.57, fig.1–5. 1899
N. Y. State Mus. Mem. 4, p.138–39, pl.45, fig.1–5. 1900
Tricholoma radicatum *Pk.*
N. Y. State Mus. Bul. 67, p.40–41, pl.82, fig.15–19. 1903
Tricholoma russula (*Schaeff.*) *Fr.*
N. Y. State Mus. Bul. 54, p.966–67, pl.77, fig.1–5. 1902
Tricholoma silvaticum *Pk.*
N. Y. State Mus. Bul. 67, p.41, pl.82, fig.1–6. 1903
Tricholoma sordidum (*Schum.*) *Fr.*
N. Y. State Mus. Bul. 131, p.38–39, pl.115. 1909
Tricholoma subacutum *Pk.*
N. Y. State Mus. Bul. 67, p.39–40, pl.82, fig.7–14. 1903
Tricholoma terreum fragrans *Pk.*
N. Y. State Mus. Rep't 49, p.57, pl.47, fig.1–10. 1896. Bot. ed.
N. Y. State Mus. Mem. 4, p.137–38, pl.45, fig.6–15. 1900
Tricholoma transmutans *Pk.*
N. Y. State Mus Rep't 48, p.168–69, pl.21, fig.1–5. 1896. Bot. ed.
Tricholoma unifactum *Pk.*
N. Y. State Mus. Bul. 105, p.36–37, pl.94. 1906

Poisonous or unwholesome

Amanita muscaria *L.*
N. Y. State Mus. Rep't 48, p.212–15, pl.42. 1896. Bot. ed.
Amanita phalloides *Fr.*
N. Y. State Mus. Rep't 48, p.215–17, pl.40, 41, fig.1–3. 1896. Bot. ed.
Amanita verna *Bull.*
N. Y. State Mus. Bul. 48, p.215, pl.41, fig.4–7. 1896. Bot. ed.
Boletus felleus *Bull.*
N. Y. State Mus. Rep't 48, p.217–18, pl.43. 1896. Bot. ed.
Clitocybe illudens *Schw.*
N. Y. State Mus. Rep't 49, p.65, pl.49. 1986. Bot. ed.
N. Y. State Mus. Mem. 4, p.179–80, pl.68. 1900

LIST OF GENERA WHOSE NEW YORK SPECIES (CHIEFLY) HAVE BEEN COLLATED WITH DESCRIPTIONS IN THE STATE BOTANIST'S REPORTS CITED

Aecidium
N. Y. State Mus. Rep't 24, p.105–8. 1872
Agaricus
N. Y. State Cab. Rep't 23, p.96–98. 1872. Bot. ed.
N. Y. State Mus. Rep't 36, p.41–49. 1884
Amanita
N. Y. State Cab. Rep't 23, p.68–70. 1872. Bot. ed.
N. Y. State Mus. Rep't 33, p. 38–49. 1880
Armillaria
N. Y. State Cab. Rep't 23, p.73. 1872. Bot. ed.
N. Y. State Mus. Rep't 43, p.40–44. 1890. Bot. ed.
N. Y. State Mus. Rep't 43, p.44–45. 1890. Bot. ed. (United States species)
Boletus
N. Y. State Cab. Rep't 23, p.127–33 1872. Bot. ed.
N. Y. State Mus. Bul. 2, p.57–66. 1887
N. Y. State Mus. Bul. 8, p.80–157. 1889. (United States species)
Boletinus
N. Y. State Mus. Bul. 8, p.74–80. 1889. (United States species)
Cantharellus
N. Y. State Cab. Rep't 23, p.121–24. 1872. Bot. ed.
N. Y. State Mus. Bul. 2, p.34–43. 1887
Claudopus
N. Y. State Mus. Rep't 39, p.67–69. 1886
Clavaria
N. Y. State Mus. Rep't 24, p.104–5. 1872
Clitocybe
N. Y. State Cab. Rep't 23, p.75–78. 1872. Bot. ed.
Clitopilus
N. Y. State Mus. Rep't 42, p.39–46. 1889. Bot. ed.
Collybia
N. Y. State Cab. Rep't 23, p.78–80. 1872. Bot. ed.
N. Y. State Mus. Rep't 49, p. 32–55. 1896. Bot. ed.
Coprinus
N. Y. State Cab. Rep't 23, p.103–4. 1872. Bot. ed.
Cortinarius
N. Y. State Cab. Rep't 23, p.105–12. 1872. Bot. ed.
Craterellus
N. Y. State Mus. Bul. 2, p.44–48. 1887
Crepidotus
N. Y. State Mus. Rep't 39, p.69–73. 1886
Entoloma
N. Y. State Cab. Rep't 23, p.88. 1872. Bot. ed.
N. Y. State Mus. Bul. 131, p.47–54. 1909

Flammula
N. Y. State Cab. Rep't 23, p.90–91. 1872. Bot. ed.
N. Y. State Mus. Rep't 50, p.133–44. 1897
Galera
N. Y. State Cab. Rep't 23, p.93–94. 1872. Bot. ed.
N. Y. State Mus. Rep't 46, p.61–69. 1893. Bot. ed.
Hebeloma
N. Y. State Cab. Rep't 23, p.95–96. 1872. Bot. ed.
Helvella
N. Y. State Mus. Rep't, 31, p.60. 1879
Hygrophorus
N. Y. State Cab. Rep't 23, p.112–14. 1872. Bot. ed.
N. Y. State Mus. Bul. 116, p.45–67. 1907
Hypholoma
N. Y. State Cab. Rep't 23, p.98–99. 1872. Bot. ed.
Lactarius
N. Y. State Cab. Rep't 23, p.114–20. 1872. Bot. ed.
N. Y. State Mus. Rep't 38, p.111–33. 1885
Lentinus
N. Y. State Cab. Rep't 23, p.126–27. 1872. Bot. ed.
N. Y. State Mus. Bul. 131, p.42–47. 1909
Lepiota
N. Y. State Cab. Rep't 23, p.70–73. 1872. Bot. ed.
N. Y. State Mus. Rep't 35, p.150–64. 1884
Leptonia
N. Y. State Cab. Rep't 23, p.89. 1872. Bot. ed.
Lycoperdon
N. Y. State Mus. Rep't 32, p.58–72. 1879
Marasmius
N. Y. State Cab. Rep't 23, p.124–26. 1872. Bot. ed.
Mycena
N. Y. State Cab. Rep't 23, p.80–84. 1872. Bot. ed.
Naucoria
N. Y. State Cab. Rep't 23, p.91–93. 1872. Bot. ed.
Odontia
N. Y. State Mus. Rep't 53, p.847. 1900
Omphalia
N. Y. State Cab. Rep't 23, p.84–85. 1872. Bot. ed.
N. Y. State Mus. Rep't 45, p.32–42. 1893. Bot. ed.
Panaeolus
N. Y. State Cab. Rep't 23, p.100–2. 1872. Bot. ed.
Paxillus
N. Y. State Mus. Bul. 2, p.29–33. 1887
Pholiota
N. Y. State Cab. Rep't 23, p.89–90. 1872. Bot. ed.
N. Y. State Mus. Bul. 122, p.141–58. 1908
Pleurotus
N. Y. State Cab. Rep't 23, p.86–87. 1872. Bot. ed.
N. Y. State Mus. Rep't 39, p.58–67. 1886

Pluteolus
N. Y. State Mus. Rep't 46, p.58–61. 1893. Bot. ed.
Pluteus
N. Y. State Cab. Rep't 23, p.87–88. 1872. Bot. ed.
N. Y. State Mus. Rep't 38, p.133–38. 1885
Psathyrella
N. Y. State Cab. Rep't 23, p.102–3. 1872. Bot. ed.
Psilocybe
N. Y. State Cab. Rep't 23, p.99–100. 1872. Bot. ed.
Puccinia
N. Y. State Mus. Rep't 25, p.110–23. 1873
Russula
N. Y. State Cab. Rep't 23, p.120–21. 1872. Bot. ed.
N. Y. State Mus. Bul. 116, p.67–98. 1907
Spathularia
N. Y. State Mus. Rep't 50, p.118–19. 1897
Strobilomyces
N. Y. State Mus. Bul. 8, p.158–59. 1889. (United States species)
Trametes
N. Y. State Mus. Rep't 54, p.169–70. 1901
Tricholoma
N. Y. State Cab. Rep't 23, p.73–75. 1872. Bot. ed.
N. Y. State Mus. Rep't 44, p.38–64. 1891. Bot. ed.
Xylaria
N. Y. State Mus. Rep't 31, p.59. 1879

EXPLANATION OF PLATES

PLATE II

91

Hypholoma boughtoni Pk.

BOUGHTON HYPHOLOMA

1 Cluster of three immature plants
2 Mature umbonate plant
3 Mature plant without an umbo
4 Vertical section of upper part of an immature plant
5 Vertical section of upper part of a mature plant
6 Transverse section of a stem
7 Four spores, x 400

HYPHOLOMA BOUGHTONI Pk.
BOUGHTON HYPHOLOMA

PLATE III

Hypholoma rigidipes Pk.

RIGID STEM HYPHOLOMA

1 Immature plant
2 Mature plant
3 Vertical section of upper part of an immature plant
4 Vertical section of upper part of a mature plant
5 Transverse section of a stem
6 Four spores, x 400

Psilocybe nigrella Pk.

BLACKISH PSILOCYBE

7 Immature plant with moist cap
8 Mature plant with moist cap
9 Mature plant with dry cap
10 Vertical section of upper part of a mature plant
11 Four spores, x 400

FIG. 1-6
HYPHOLOMA RIGIDIPES PK.
RIGID STEM HYPHOLOMA

FIG. 7-11
PSILOCYBE NIGRELLA PK.
BLACKISH PSILOCYBE

PLATE 117

Hebeloma album Pk.

WHITE HEBELOMA

1 Young plant
2 Mature plant with expanded cap
3 Mature plant with convex cap tinged with yellow
4 Vertical section of upper part of a young plant
5 Vertical section of upper part of a mature plant
6 Four spores, x 400

Clitocybe multiceps Pk.

MANY CAP CLITOCYBE

7 Cluster of seven plants
8 Vertical section of upper part of a plant
9 Four spores, x 400

FIG. 1-6
HEBELOMA ALBUM PK.
WHITE HEBELOMA

FIG. 7-9
CLITOCYBE MULTICEPS PK.
MANY CAP CLITOCYBE

PLATE 118

Lactarius aquifluus Pk.

WATERY MILK LACTARIUS

1 Young plant with moist cap
2 Mature plant with dry margin
3 Mature plant with entire cap dry
4 Vertical section of upper part of a plant
5 Transverse section of a stem
6 Four spores, x 400

LACTARIUS AQUIFLUUS Pk.
WATERY MILK LACTARIUS

PLATE 119

Entoloma grande Pk.

GRAND ENTOLOMA

1 Cluster of one mature and two young plants
2 Mature plant with umbonate and rugosely wrinkled cap
3 Vertical section of upper part of a young plant
4 Vertical section of upper part of a mature plant
5 Four spores, x 400

ENTOLOMA GRANDE Pk.
GRAND ENTOLOMA

PLATE 120

Boletus viridarius Frost

GREEN LAWN BOLETUS

1 Young plant with tubes concealed by the veil
2 Young plant with tubes exposed
3 Mature plant showing a fragment of the white veil still adhering to the margin of the cap
4 Mature plant with whitish cap appendiculate with the ruptured veil
5 Young plant with yellowish tubes
6, 7 Mature plants showing color of mature tubes; stem of no. 7 only partly reticulated above the collar
8 Vertical section of upper part of a young plant
9 Vertical section of upper part of a mature plant
10 Four spores, x 400

BOLETUS VIRIDARIUS Frost
GREEN LAWN BOLETUS

EXTRALIMITAL SPECIES

PLATE W

Amanita morrisii Pk.

MORRIS AMANITA

1 Young plant with expanded cap
2 Mature plant with expanded cap and two fragments of the volva adhering to the base of the stem
3 Vertical section of the upper part of a mature plant
4 Four spores, x 400

AMANITA MORRISII Pk.
MORRIS AMANITA

PLATE X

Lactarius bryophilus Pk.

MOSS LOVING LACTARIUS

1 Young plant
2 Mature plant showing upper surface of cap
3 Vertical section of a young plant
4 Vertical section of a mature plant
5 Four spores, x 400

Agaricus eludens Pk.

ELUSIVE MUSHROOM

6 Young plant showing white gills and brown cap
7 Middle aged plant showing pink gills and brown cap
8 Mature plant showing brown gills and scaly cap
9 Mature plant showing red wound spot on the stem
10 Vertical section of upper part of a middle aged plant
11 Vertical section of upper part of a mature plant
12 Transverse section of a stem
13 Four spores, x 400

FIG. 1-5
LACTARIUS BRYOPHILUS PK.
MOSS LOVING LACTARIUS

FIG. 6-13
AGARICUS ELUDENS PK.
ELUDING AGARICUS

PLATE Y

Cortinarius ferrugineo-griseus Pk.

RUSTY GRAY CORTINARIUS

1 Young moist plant showing the webby veil
2 Mature moist plant showing remains of the spore stained veil on the stem
3 Vertical section of a young plant
4 Vertical section of a mature plant with part of the cap wanting

CORTINARIUS FERRUGINEO-GRISEUS Pk.
RUSTY GRAY CORTINARIUS

PLATE Z

Cortinarius ferrugineo-griseus Pk.

RUSTY GRAY CORTINARIUS

1 Mature dry plant with violaceous stem
2 Vertical section of a small mature plant with violaceous stem
3 Four spores, x 400

Cortinarius actutoides Pk.

ACUTOID CORTINARIUS

4 Group of six young moist plants, one showing floccose scales of the white veil on the cap
5 Two mature dry plants
6 Vertical section of a young plant
7 Vertical section of a mature plant
8 Four spores, x 400

Russula blackfordae Pk.

BLACKFORD RUSSULA

9, 10 Two plants with convex cap
11 Mature plant with expanded cap
12 Vertical section of a mature plant
13 Four spores, x 400

FIG. 1-3
CORTINARIUS FERRUGINEO-GRISEUS PK.
RUSTY GRAY CORTINARIUS

FIG. 4-8
CORTINARIUS ACUTOIDES PK.
ACUTOID CORTINARIUS

FIG. 9-13
RUSSULA BLACKFORDAE PK.
BLACKFORD RUSSULA

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New York State Education Department

New York State Museum

JOHN M. CLARKE, Director

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These reports are made up of the reports of the Director, Geologist, Paleontologist, Botanist and Entomologist, and museum bulletins and memoirs, issued as advance sections of the reports.

Director's annual reports 1904–date.

1904. 138p. 20c.
1905. 102p. 23pl. 30c.
1906. 186p. 41pl. 35c.
1907. 212p. 63pl. 50c.
1908. 234p. 39pl. map. 40c.

These reports cover the reports of the State Geologist and of the State Paleontologist. Bound also with the museum reports of which they form a part.

Geologist's annual reports 1881–date. Rep'ts 1, 3–13, 17–date, 8vo; 2, 14–16, 4to.

In 1898 the paleontologic work of the State was made distinct from the geologic and was reported separately from 1899–1903. The two departments were reunited in 1904, and are now reported in the Director's report.

The annual reports of the original Natural History Survey, 1837–41, are out of print.

Reports 1–4, 1881–84, were published only in separate form. Of the 5th report 4 pages were reprinted in the 39th museum report, and a supplement to the 6th report was included in the 40th museum report. The 7th and subsequent reports are included in the 41st and following museum reports, except that certain lithographic plates in the 11th report (1891) and 13th (1893) are omitted from the 45th and 47th museum reports.

Separate volumes of the following only are available.

Report	*Price*	*Report*	*Price*	*Report*	*Price*
12 (1892)	$.50	17	$.75	21	$.40
14	.75	18	.75	22	.40
15, 2v.	2	19	.40	23	.45
16	1	20	.50	[*See* Director's annual reports]	

Paleontologist's annual reports 1899–date.

See first note under Geologist's annual reports.

Bound also with museum reports of which they form a part. Reports for 1899 and 1900 may be had for 20c each. Those for 1901–3 were issued as bulletins. In 1904 combined with the Director's report.

Entomologist's annual reports on the injurious and other insects of the State of New York 1882–date.

Reports 3–20 bound also with museum reports 40–46, 48–58 of which they form a part Since 1898 these reports have been issued as bulletins. Reports 3–4, 17 are out of print, other reports with prices are:

Report	*Price*	*Report*	*Price*	*Report*	*Price*
1	$.50	10	$.35	18 (Bul. 64)	$.20
2	.30	11	.25	19 (" 76)	.15
5	.25	12	25	20 (" 97)	.40
6	.15	13	*Free*	21 (" 104)	.25
7	.20	14 (Bul. 23)	.20	22 (" 110)	.25
8	.25	15 (" 31)	.15	23 (" 124)	.75
9	.25	16 (" 36)	.25	24 (" 134)	.35

Reports 2, 8–12 may also be obtained bound in cloth at 25c each in addition to the price given above.

Botanist's annual reports 1867–date.

Bound also with museum reports 21–date of which they form a part; the first Botanist's report appeared in the 21st museum report and is numbered 21. Reports 21–24, 29, 31–41 were not published separately.

Separate reports for 1871–74, 1876, 1888–98 are out of print. Report for 1899 may be had for 20c; 1900 for 50c. Since 1901 these reports have been issued as bulletins.

Descriptions and illustrations of edible, poisonous and unwholesome fungi of New York have also been published in volumes 1 and 3 of the 48th (1894) museum report and in volume 1 of the 49th (1895), 51st (1897), 52d (1898), 54th (1900), 55th (1901), in volume 4 of the 56th (1902), in volume 2 of the 57th (1903), in volume 4 of the 58th (1904), in volume 2 of the 59th (1905), 60th (1906), in volume 2 of the 61st (1907) and 62d (1908) reports. The descriptions and illustrations of edible and unwholesome species contained in the 49th, 51st and 52d reports have been revised and rearranged, and, combined with others more recently prepared, constitute Museum memoir 4.

Museum bulletins 1887–date. 8vo. *To advance subscribers, $2 a year or $1 a year for division* (1) *geology, economic geology, paleontology, mineralogy; 50c each for divisions* (2) *general zoology, archeology and miscellaneous,* (3) *botany,* (4) *entomology.*

Bulletins are grouped in the list on the following pages according to divisions.

The divisions to which bulletins belong are as follows:

1 Zoology	48 Geology	94 Botany
2 Botany	49 Paleontology	95 Geology
3 Economic Geology	50 Archeology	96 "
4 Mineralogy	51 Zoology	97 Entomology
5 Entomology	52 Paleontology	98 Mineralogy
6 "	53 Entomology	99 Paleontology
7 Economic Geology	54 Botany	100 Economic Geology
8 Botany	55 Archeology	101 Paleontology
9 Zoology	56 Geology	102 Economic Geology
10 Economic Geology	57 Entomology	103 Entomology
11 "	58 Mineralogy	104 "
12 "	59 Entomology	105 Botany
13 Entomology	60 Zoology	106 Geology
14 Geology	61 Economic Geology	107 "
15 Economic Geology	62 Miscellaneous	108 Archeology
16 Archeology	63 Paleontology	109 Entomology
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v. 2 pt2 Emmons, Ebenezer. Second Geological District. 10 +437p. 17pl. 1842.

v. 3 pt3 Vanuxem, Lardner. Third Geological District. 306p. 1842.

v. 4 pt4 Hall, James. Fourth Geological District. 22 +683p. 19pl. map. 1843.

DIVISION 5 AGRICULTURE. Emmons, Ebenezer. Agriculture of New York; comprising an account of the classification, composition and distribution of the soils and rocks and the natural waters of the different geological formations, together with a condensed view of the meteorology and agricultural productions of the State. 5v. il. pl. sq. 4to. Albany 1846–54. *Out of print.*

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—— Map of the State of New York Showing the Location of Quarries of Stone Used for Building and Road Metal. Mus. bul. 17. 1897. Free.

—— Map of the State of New York Showing the Distribution of the Rocks Most Useful for Road Metal. Mus. bul. 17. 1897. Free.

—— Geologic Map of New York. 1901. Scale 5 miles to 1 inch. *In atlas form* $3; *mounted on rollers* $5. *Lower Hudson sheet* 60c.

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